Goals & Targets
For Australia's Health in the Year 2000 and Beyond

1993

GOALS AND TARGETS FOR AUSTRALIA'S HEALTH IN THE YEAR 2000 AND BEYOND

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Improving the Health of All Australians

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1.1 Introduction and Background

Achieving the health goals and targets which have been set in this report would place Australia on course to be the healthiest country in the world. It will require action at all levels in society - by individuals and local communities, by State and Commonwealth governments, and by non-government organisations. Such a broad base for action is reflected in the proposals for implementation which are outlined in this first section.

The report is ambitious in its analysis of what creates health and what causes ill health in Australia, and challenging in its explicit recognition of the substantial differences in health status between different population groups in Australia.

This report is one of a series of reviews being conducted by the Commonwealth Department of Health, Housing and Community Services (DHHCS) to assist in setting directions for the organisation and funding of health services, and for improving health in Australia. These include a comprehensive evaluation of the National Better Health Program and the wide-ranging work of the National Health Strategy (NHS).[1]

The NHS was set up in 1990 to identify ways of improving the effectiveness and efficiency of the health system, with a

1 Macklin J. 1990. *The National Health Strategy: Setting the Agenda for Change*. Background Paper No 1. National Health Strategy Unit, Melbourne.

correspondingly strong emphasis on financing health services. The Strategy is intended to contribute to future Commonwealth-State/Territory agreements on the funding of the public health care system. The proposals in this report add to those within the NHS.

This report reflects the Terms of Reference[2] for the consultants and records the work which was undertaken in three related stages:

- **Review** — assessing what progress has been made in relation to the promotion of better health in Australia, specifically in relation to the original set of goals and targets published in 1988, and experience gained in Australia and overseas in the implementation of health goals and targets.

- **Re-definition** — constructing a new framework and structure for setting goals and targets, and proposing a new set of goals and targets which reflect a comprehensive analysis of the determinants of ill health in Australia.

- **Implementation** — identifying some of the basic options for how the new goals and targets can be achieved most effectively through the health system, and through other sectors of government and the wider community.

Section 1 of the report, Improving the Health of All Australians, examines the challenge of achieving improved health for all Australians and considers how setting national health goals and targets can act as a focal point for meeting this challenge. This section also outlines the options for the implementation and monitoring of the targets, and considers some of the potential implications of goal and target setting for the structure, funding, and management of the health system.

Section 2 of the report, National Health Goals and Targets, includes revisions of the existing goals and targets and proposes new goals and targets. This section has been developed on the basis of available information, and in the light of wide-ranging advice received throughout the project, particularly during a three month period of consultation (May-August 1992). Where possible, measurable targets have been set on the foundation of suitable data. In many other cases, the basis for targets is explained and proposals are made for targets to be developed in the future.

2 A copy of the Terms of Reference is included as Appendix 1 of the document.

1.2 What are National Health Goals and Targets?

Setting goals and targets has been a part of good management practice for many years. Goals and targets are increasingly being used in the strategic planning of health services to ensure equity and efficiency in the allocation of resources.

Goals indicate the direction and desired pace of change in pursuing improvements in the health of the population. They are intended to inspire, to motivate, and to encourage co-operation among all those individuals and sectors whose actions affect the health of the community. National goals and targets support decisions concerning national health priorities and provide a mechanism to monitor and review progress - a means of assessing the effectiveness of the combined actions taken to improve the health of all Australians.

In this sense goal and target setting is as much a strategic approach to planned change as it is a technical exercise in predicting future trends in health status indicators.

In this report health **goals** are used to represent a vision for the future - the outcomes which, in light of current knowledge and resources, this country might reasonably hope to achieve within a reasonable period. Goals are general statements of intent and aspiration, intended to reflect the values of the community in general and the health sector in particular, regarding a healthy society.

Targets are specific and measurable. They state, for a given population, the amount of change (using an indicator) which could reasonably be expected within a given time. Targets enable assessment of progress and improved accountability in the use of resources. Where available information has allowed, the targets in this report have been based on:

- an estimate of current and likely future trends relating to the health indicator used;
- assessment of the potential to reduce or further prevent development of specific health problems, or to alleviate their impact;
- consideration of the extent to which the achievement of greater equity in health requires action with or for specific population sub-groups; and
- assessment of the extent to which it is possible to influence the underlying social, economic, or environmental factors which impact on health problems.

The targets in the report have been developed in the light of advice from a broad range of individuals and organisations, and on the basis of widely varying access to the information above. For these reasons the targets vary in the nature of their construction, and ultimately in their technical quality. Correspondingly, **the targets in this report should be viewed as the best estimates possible at this time using available information.**

Subsequent reviews to determine progress in relation to the targets will also offer the opportunity to update and improve these targets, particularly as the quality and range of available information improves.

It is important to recognise what health goals and targets can and cannot do. Health goals and targets can focus attention on the challenge of improving equity and efficiency in achieving better health. By specifying **priority population groups** for each of the targets, the gap in health status between the most and least advantaged in Australia is made explicit. Achieving progress in relation to the target will generally mean that this gap has been narrowed.

By extending the **range of indicators** used to set targets to include social and environmental determinants of health, some of the underlying impediments to improved health will also be removed, further improving the possibility of achieving equity in health.

It is essential to recognise that the designation of priority population groups for individual targets in this report is intended to highlight the unequal impact of a particular condition or circumstance on that population group. It does not

imply that all necessary action to achieve the targets is the direct responsibility of the individuals most affected. Rather, action may well be required by others working co-operatively with the priority population group to achieve the targets by removing social and environmental impediments to good health.

Nor does setting a target necessarily imply that new or more action is needed. With few exceptions, the issues for which health targets are proposed are currently being addressed by policy, legislation, regulation, programs, and services. Pursuing the achievement of the targets proposed in this report need not imply the introduction of radically different programs and services, or necessarily, a massive increase or shift in public spending.

Targets offer a benchmark against which existing policy, and the efficiency of expenditure on current programs and services, may be examined. From that initial position, activity may be revised to better match the targets.

In most cases, decisions about what actions are necessary for the achievement of a target need to be taken on the basis of a much wider appraisal of the technical possibilities, including evidence of efficiency, assessment of local needs, and community response. These issues are examined in greater detail in Section 1.5 in the report.

National health goals and targets can promote a better informed and better balanced public and professional debate about health policy - particularly by supporting a move away from narrow discussions about the relative levels of investment in service provision without reference to outcomes.

Health goals and targets pose fundamental questions of how best to improve the health status of populations, and about the changes necessary in current systems and structures in order to do this. In this sense, **setting targets can be educative as well as help to legitimise a wider range of health-enhancing actions in society.**

Target setting should not be confused with evaluation. With few exceptions, the range of factors which may support or obstruct the achievement of an individual target will be beyond the control of any individual program or service. To this end, achieving a national or State health target could only rarely be seen as the direct responsibility of any individual program or service.

Not achieving a target should not be seen as a sign of failure for any **individual** project, program or service.

Monitoring and accountability in relation to the goals and targets are considered further in Section 1.5 in this report.

1.3 Promoting Better Health in Australia – What Can Be Learned from Past Experience?

1.3.1 Experience in Australia – *Health for All Australians*

The World Health Organization's (WHO) *Global Strategy for Health for All by the Year 2000*[3] was published in 1981. By 1985 Australia had established the Better Health Commission[4] to investigate and report on the current health status of the Australian population, to identify factors underlying health problems, and to make recommendations on ways to address these. Its terms of reference gave specific attention to sectors other than health, and to at risk population groups. The Commonwealth Department of Health submitted a draft plan to the Better Health Commission - *Advancing Australia's Health*[5] - in which ten goals, based on leading causes of death, disease, and disability in Australia, were identified.

Also by 1985, the United States (US)[6 7] and countries in Europe[8] (guided by WHO European Office) had developed more specific national health goals and targets, and were gaining experience in working to achieve them. The Better Health Commission was able to draw on this experience, and its consultation process demonstrated awareness of the need for national health goals and targets to reflect both scientific knowledge of health status and the concerns of the Australian community.

The Better Health Commission recommended national health goals for three major health problem areas - cardiovascular disease, nutrition, and injury - and recommended that goals be developed in several other areas.

Following publication of the Better Health Commission's report and its receipt by all Australian health ministers, the Health Targets and Implementation Committee was then established by the Australian Health Ministers' Conference. It was given responsibility for developing national health goals and targets 'for as many key health issues as possible' and for planning their implementation. The *Health for All Australians*[9] report represented the 'first national attempt in Australia to compile goals and targets for improving health and reducing inequalities in health status among population groups'.[10] As such it was an important effort to re-focus attention on a more positive vision of what health policy in Australia should aim to achieve - **better health for all Australians.**

Endorsed by the Australian Health Ministers' Conference in 1988, the 20 goals and 65 targets were grouped into three major categories - *population groups, major causes of sickness and death, and risk factors.* The goals and targets were set for major causes of premature death, major risk factors, causes of premature morbidity, and areas in which change had been demonstrated to be feasible. They reflected international experience at the time and were in line with those set by other western nations.

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3 World Health Organization. 1981. *Global Strategy for Health for All by the Year 2000.* WHO, Geneva.

4 Better Health Commission. 1986. *Looking Forward to Better Health. Vols 1 2 3.* Australian Government Publishing Service, Canberra.

5 Department of Health. 1985. *Advancing Australia's Health: Towards National Strategies and Objectives for Health Advancement.* Draft Plan. Commonwealth Department of Health, Canberra.

6 Department of Health and Human Services. 1979. *Healthy People: the Surgeon-General's Report on Health Promotion and Disease Prevention.* US Department of Health and Human Services, US Government Printing Office, Washington DC.

7 Department of Health and Human Services. 1980. *Promoting Health/Preventing Disease: Objectives for the Nation.* Department of Health and Human Services, U.S. Government Printing Officer, Washington DC.

8 World Health Organization. 1985. *Targets for Health for All.* WHO, Regional Office for Europe, Copenhagen.

9 Health Targets and Implementation Committee. 1988. *Health for All Australians.* Report to the Australian Health Ministers' Advisory Council and the Australian Health Ministers' Conference. Australian Government Publishing Service, Canberra.

10 Health Targets and Implementation Committee. 1988. Ibid, p 27.

Five national priority areas were proposed:

- improved nutrition
- preventable cancers
- high blood pressure
- injury prevention
- health of older persons

The Australian Health Ministers' Conference endorsed these priorities at their meeting in Alice Springs in 1988 and the National Better Health Program was allocated matched Commonwealth/State funding of $39 million for four years to initiate strategies to achieve the targets in each of these priority areas.

The *Health for All Australians* report contained a thorough exploration and synthesis of knowledge on the health status of Australians, of the perceived needs of the community, and of the infrastructure, funding mechanisms, and direction required to improve health status. It emphasised the need to influence determinants of health beyond behavioural risk factors and to reduce unjust inequalities in the health status of Australians. At that time, however, there was little experience with setting goals and targets which directly addressed these latter needs.

In terms of **strategic direction**, *Health for All Australians* provided leadership and focus, particularly to those working in the health and non-government sectors to promote health and prevent premature illness and death. New resources and action (via the National Better Health Program) were committed to promoting health. Several States went on to develop State plans based on locally relevant versions of the national goals and targets, and committed additional funding to health promotion/ disease prevention.

In terms of **technical direction**, *Health for All Australians* was limited to defining targets only in areas where substantial national health statistics existed. This information base has developed considerably since publication of the 1988 report. Information about progress towards health, as defined by the goals and targets, has become more timely and useful for planning interventions and services.

The publication of the national health goals and targets in 1988 represented an important landmark in public health policy in Australia. It articulated many of the major health challenges facing Australia and provided a clear sense of direction in terms of what needed to be done to meet these challenges. The subsequent establishment of the National Better Health Program, and the injection of funding for health promotion at national and State levels, was instrumental in creating a more substantial infrastructure for health promotion in Australia.

The National Better Health Program also led directly to the establishment of a range of projects to promote better health in Australia. Such achievements should not be neglected. The resource provided by the work of the Better Health Commission, and by the National Health Goals and Targets Implementation Committee which preceded the publication of the 1988 report, has been invaluable in the development of this report and its proposals.

However, despite the clear analysis of barriers to the achievement of improved health status among Australians, and particular emphasis on the need to address unjust inequalities in health, the conceptual framework within which the 1988 goals and targets were developed has proved to be limited. The framework did not fully reflect the social view of health which had informed the analysis. The experience of implementing the goals and targets in the *Health for All Australians* report, notably through the National Better Health Program, has provided a number of lessons:

- **The need for a broader framework for action.** Although there was a clear intent to address unjust inequalities in health status, and although population-related goals were set, limiting the targets to mortality, morbidity, and risk factors failed to emphasise sufficiently the importance of modifying the underlying social and environmental determinants of health, and to legitimise action to do so.

- **Mechanisms for accountability and effective monitoring need to be clearly defined.** Accountability for achieving the targets and provision of a mechanism for reviewing progress were not fully considered

beyond the establishment of the National Better Health Program. The Australian Institute of Health reported on gaps and deficiencies in existing data sources/ systems[11 12 13 14 15 16] and made a series of recommendations for revising the goals and targets which related to the priorities of the National Better Health Program. Their reports indicated that it was too soon after setting the initial goals and targets to enable assessment of many improvements in health status outcomes. Furthermore, apart from those goals and targets included within the National Better Health Program, measurement of progress of any kind has been patchy. This has highlighted the difficulty in assessing progress if responsibility for implementing strategies to achieve targets, and for monitoring progress in their achievement, is not clearly assigned.

• **The importance of engaging the health system.** The evaluation of the National Better Health Program clearly identified that the mainstream health services were not engaged in the achievement of the national goals and targets. In practice, achievement of the targets came to be seen as the responsibility only of the fringe areas of public health and health promotion. Although there was limited expansion of resources for health promotion, health system funding, management, and direction were not significantly influenced by the targets. The health system in Australia continues to be dominated by the process of providing clinical, diagnostic, and treatment services, with little reference to improvements in population health status as a consequence of these investments.

Experience in the States and Territories in Health Goal and Target Setting 1.3.2

Although there is little evidence of substantial effect on the mainstream health services, activity in relation to health goals and targets at national level has been matched by developments in the States and Territories. Since 1985, most States have taken some steps to further develop their health policies toward the achievement of improved population health status. Western Australia, New South Wales, and Tasmania provide examples of the different approaches taken.

In 1986, a comprehensive profile of the health status of the Western Australian population was published. It identified 12 priority issues for health promotion and health education.[17] While targets were not set, health indicators were delineated. The 1991 follow-up review of the health status of Western Australians[18] used these to measure and report on progress - which had been substantial since 1980. The 1991 review, which included indications of where health gains might be made during the next decade, is a valuable model. The information included in the Western Australian reports has been used to formulate some of the national health goals and targets presented here.

In 1989 the New South Wales Health Department published goals for health promotion which reflected a State perspective on the five priorities of the

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11 Mathers C. 1990. *Australia's Health Goals and Targets: Data Requirements and Recommendations for Review.* Australian Institute of Health, Canberra.

12 Australian Institute of Health. 1989. *The National Better Health Program. Improved Nutrition: Monitoring Targets Towards 2000.* Australian Institute of Health, Canberra.

13 Australian Institute of Health. 1989. *The National Better Health Program. Preventable Cancers: Monitoring Targets Towards 2000.* Australian Institute of Health, Canberra.

14 Australian Institute of Health. 1989. *The National Better Health Program. Injury Prevention: Monitoring Targets Towards 2000.* Australian Institute of Health, Canberra.

15 Australian Institute of Health. 1989. *The National Better Health Program. High Blood Pressure: Monitoring Targets Towards 2000.* Australian Institute of Health, Canberra.

16 Australian Institute of Health. 1989. *The National Better Health Program. Health of Older People: Monitoring Targets Towards 2000.* Australian Institute of Health, Canberra.

17 Holman CDJ, Ed. and 41 others. 1986. *Our State of Health. An Overview of Health and Illness in Western Australia in the 1980s.* Steering Committee for the Review of Health Promotion and Health Education in Western Australia, Health Department of Western Australia, Perth.

18 Waddell VP and Lee NA Eds. 1991. *Our State of Health: An Overview of the Health of the Western Australian Population* 1991 Edition. Health Department of Western Australia, Perth.

National Better Health Program.[19] Since then, the Health Department has given substantial attention to the feasibility of setting targets for health outcomes which relate more directly to health system activity and service provision, and these feature in its 1991 corporate plan.[20]

The NSW Health Outcomes Initiative was established in 1991, to develop and implement measures designed to improve health information on the outcomes and costs of specific health services, ranging from prevention through to diagnosis and treatment. This project has proven particularly helpful by informing discussion on the feasibility of setting goals and targets for the health system, and in identifying important information needs.

The Tasmanian Department of Health embarked on the preparation of health goals and targets for Tasmania in 1990. Following publication of a profile of the health status of Tasmanians, there has been extended public consultation, culminating in the preparation of health goals and targets in 1992.[21] The Tasmanian Health Department is planning to develop health service agreements between the Department and each regional health board which will then commit financial resources to achieving Statewide, and regional goals and targets. The Tasmanian work has been helpful in illustrating a workable model for the development of health system goals and targets at a State level, in highlighting mechanisms for effective consultation, and in emphasising the importance of both access to services and community participation in goal- and target-setting.

International Experience in Health Goal and Target Setting 1.3

Several countries have used national health goals and targets to guide decision-making in relation to health services provision and health promotion activities. In developing the proposals in this report consideration has been given to this experience which, like the work by individual States in Australia, offers important guidance on both technical and strategic issues.

The US has the longest experience in developing and using goals and targets (called objectives), having published their first set of objectives in 1980 for the decade to 1990.[22] These objectives were reviewed over a three year period between 1985-88 which subsequently led to the publication of a new set of objectives for the decade 1991-2000.[23 24]

The midcourse review provided evidence of how the national health objectives 'not only helped establish a national health agenda that identified specified health priorities, but also facilitated organised responses and has supported progress towards enhanced levels of health.'[25]

More concerted efforts are now in place in the US to build upon the achievements of the objectives. In particular the Office for Health Promotion and Disease Prevention has established a consortium of more than 300 non-government organisations committed to the achievement of the objectives relevant to their activities. The Office has also designated different government agencies as lead agencies responsible for accounting for progress (or lack of it) in relation to the objectives. This accountability is formalised through annual

19 New South Wales Department of Health. 1989. *Health for All: Promoting Health and Preventing Disease in New South Wales*. NSW State Health Publications, Sydney.

20 New South Wales Department of Health. 1991. *Vision for Health: Corporate Plan for the NSW Health System*. New South Wales Health Publications, Sydney.

21 Department of Health, Tasmania. 1992. *Health Goals and Targets for Tasmania*. Health Policy Division, Department of Health, Hobart.

22 US Department of Health and Human Services. 1980. Ibid.

23 US Office of Disease Prevention and Health Promotion. 1986. *The 1990 Health Objectives for the Nation: a Midcourse Review*. Public Health Service, US Department of Health and Human Services. Washington DC.

24 US Department of Health and Human Services. 1990. *Healthy People 2000*. Office of Disease Prevention and Health Promotion. US Department of Health and Human Services, Washington DC.

25 US Department of Health and Human Services. 1986. Ibid.

meetings between the lead agencies and the Office for Health Promotion and Disease Prevention, and includes responsibility for making progress with the technical task of developing indicators and baseline measures where those may not have existed.

The US experience is especially helpful in drawing attention to the importance of monitoring and accountability, and to the potential role of non-government organisations in pursuing the achievement of the targets. Of all countries, the US also has the most sophisticated and comprehensive technical base for monitoring progress towards the achievement of the objectives.

In the United Kingdom, arrangements for the funding and management of the health system, including health promotion, are devolved to the four constituent countries. Both Wales and England have developed health goals and targets, though in entirely different ways. Both have some relevance to Australia, particularly because of the similarity in structure of the public health systems.

In Wales, the Health Promotion Authority published its first goals and targets in 1990. These provided a useful example of an approach to target setting which extended beyond the targets for changes in mortality/morbidity/lifestyles which characterised the early US targets. The Welsh targets were also directed towards achieving policy and environmental change, and included an explicit commitment to involve other non-health sectors.

In a separate but related development, the health services in Wales have been subjected to an extensive program of review directed towards maximising health gain for the resources invested in the health system.[26] This initiative has provided an example of re-orientation of the health system towards the achievement of health outcomes from service investment. Ten priority areas have been chosen for initial attention, and for each a protocol for health gain is being produced as the basis for future funding decisions.[27] [28] This Welsh model provides the best available example of how to engage fully the health system in the achievement of population health targets.

In England, an 18-month program of consultation and review has led to the publication of *The Health of the Nation*[29] which includes targets for improved health in five priority areas. The English program has yet to be implemented, but has drawn attention to the importance of focusing on a limited number of priorities from a range of possible actions. In addition, to facilitate and monitor progress, the English have established an inter-departmental ministerial committee, chaired by a non-health minister, which is responsible for reporting to Cabinet at regular intervals on progress with the implementation.

This model of a ministerial committee is not new, and was pioneered by the Canadian Province of Ontario through its Premier's Council on Health, Well-being and Social Justice which is responsible for co-ordinating inter-sectoral action for health. The Panel on Health Goals for Ontario established health goals which are being pursued through this co-ordinated approach.[30]

New Zealand also has some limited experience in setting targets for better health, and in using them to help determine priorities for health services investment. These targets were used to determine 'accountability for the use of resources and for achieving health care outcomes', and to form the basis for a contract between government and health boards 'to provide

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26 Welsh Health Planning Forum. 1989. *Strategic Intent and Direction for the NHS in Wales*. Welsh Office, NHS Directorate, Cardiff

27 Welsh Health Planning Forum. 1990. *Protocol for Investment in Health Gain: Cancers*. Welsh Office, NHS Directorate, Cardiff.

28 Welsh Office Planning Forum. 1991. Protocol for *Investment in Health Gain: Cardiovascular Disease*. Welsh Office, NHS Directorate, Cardiff.

29 Department of Health. 1992. *The Health of the Nation: A Strategy for Health in England*. Her Majesty's Stationery Office, London.

30 Ontario Premiers' Council on Health: Panel on Health Goals for Ontario. 1987. *Health for All Ontario: Report of the Panel on Health Goals for Ontario*. Ottawa Government Printing, Ottawa.

performance-oriented accountability'.[31] A subsequent change in government in New Zealand, and re-organisation of health services has meant that this approach has not been implemented.

These international experiences provide important guidance for Australia. In particular, such experience:

- indicates the usefulness of a broad conceptual framework which legitimises a range of actions across sectors to promote better health;
- emphasises the importance of developing coalitions of interest involving communities, government, and non-government organisations in the formulation and common pursuit of individual targets;
- demonstrates the feasibility of actively engaging the mainstream health system in the achievement of goals and targets;
- emphasises the need for mechanisms for monitoring and accountability, and for the nomination of specified lead agencies to fulfil this and other roles; and
- highlights the need for excellent technical support, and regular, well-presented feedback on progress.

Overall, this international experience indicates that goals and targets can provide a focus for action to substantially influence health policy in industrialised nations towards planned improvements in population health status. It represents a substantial resource which has informed the approach taken in the development of this report.

1.3.4 Experience in Achieving Equity in Health

One common theme of most of the goal-based developments within Australia and internationally is an explicit recognition of the need to address unjust inequalities in health status. The nature of these inequalities has been closely examined in a research paper published by the NHS. This paper explains equity in the following terms:

> While individuals can make choices that will influence their health, their health will also be affected by a number of factors about which they may have little direct control. These may be structural factors such as education or the environment in which we live. Action to reduce structural impediments to good health can enlarge people's opportunities to choose to engage in healthy behaviour and need not be seen as an alternative to the exercise of individual responsibility. The focus of equity can be on reducing vulnerability so that people can then exercise greater autonomy in relation to their health.[32]

In these terms achieving equity is not so much a question of equalising health status indicators among populations - there will always be biological differences between individuals who exercise their right to free choice. Rather it is concerned with creating equal opportunities for access to health and health care, which means improving opportunities especially of the most disadvantaged.

The analysis of differences in health status among population groups which was undertaken through the NHS has reinforced existing recognition of the unequal impact of social and environmental conditions on different population groups. In particular, the paper draws attention to the relationship between low income and poor health status. The NHS paper also indicates clearly how a poor physical environment (housing, water supply, and waste disposal) substantially contributes to the high incidence of disease and ill health among Aboriginals and Torres Strait Islanders. The cultural and language barriers to service access and community participation which are experienced by both Aboriginals and many people from non-English speaking backgrounds are also important. Australia's large geographic

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31 New Zealand Department of Health. 1991. 1991-92 *Health Indicators and Performance Targets*. New Zealand Department of Health, Wellington.

32 National Health Strategy. 1992. *Enough to Make You Sick: How income and environment affect health*. Research Paper No 1. National Health Strategy, Melbourne p 19.

distances also prove a formidable barrier to equal access.

Three important observations about these unjust inequalities in health status have substantially influenced the approach to goal-and target-setting taken in this report.

First, that action to improve health for all Australians, and to address inequity in health, requires a balance of action by individuals (in relation to modifiable behaviours and risks) and of action by and for the whole community.

Second, that much of this social action will be outside the traditional boundaries of the health care system, and will require close consideration of the health impact of decisions taken in other sectors such as housing, urban development, transportation, and education.

Third, that the health system itself will need to respond positively to the challenges implied by those unjust inequities - both in the range and direction of services provided.

Revising the National Health Goals and Targets 1.4

A New Framework 1.4.1

The WHO definition of health recognises that health is more than just the absence of disease, and emphasises that health is 'a complete state of physical, social and mental wellbeing'. More recently, WHO has also emphasised that health is a **resource for life** and not the object of living. Health is a product of ways of living (lifestyles), and living conditions (social and economic environment).[33]

This latter WHO definition of health, included in the Ottawa Charter, and reflected in the Declaration of Alma Ata,[34] strongly emphasises a range of pre-conditions for health. These include adequate shelter, food, and income, access to education, and freedom from the threat of war.

This report has attempted to reflect these broadly-based definitions of health by not only emphasising the importance of preventing avoidable disease and minimising its impact on the quality of life, but also by drawing attention to the possibilities of changing lifestyles and living conditions (including pre-requisites for health) to improve health. Although due emphasis is given to physical health, attention is also given to both the mental and social dimensions of health.

The new framework for developing goals and targets proposed in this report has been established on the basis of a year-long process of review, consultation, and refinement. This new framework draws upon the experience of developing the 1988 goals and targets, and includes a refined range of targets concerning avoidable mortality and morbidity, healthy lifestyles, and risks to health. It also reflects an analysis of the immediate and underlying causes of ill health which have informed past assessments of health status in Australia. As a

33 World Health Organization. 1986. *Ottawa Charter for Health Promotion*. World Health Organization, Geneva.

34 World Health Organization. 1979. *Declaration of Alma Ata*. World Health Organization, Geneva.

consequence, this report includes targets which relate to health literacy and health skills, and, in order to represent fully the social and environmental determinants of health, new goals relating to healthy environments have also been proposed.

The rationale for this approach is straightforward in one sense in that it reflects an epidemiological analysis of the causal chain as far as can be determined. Thus, attempts to reduce cardiovascular disease are dependent, in part, upon a reduction in tobacco smoking. This in turn is influenced by personal knowledge and skills (to stop and/or maintain non-smoking) and by social norms and environmental restrictions. Similarly, attempts to reduce road traffic injury are variously dependent upon safer driving (for example, avoiding drinking and driving), improved driver skills, and significantly, on effective traffic management and improved car design.

However, such a simple approach denies a much more complex analysis of the underlying causes of ill health, particularly the root causes of disadvantage and inequity. For example, among Aboriginals and Torres Strait Islanders the unequal impact of infectious disease and of substance misuse is a cause for major concern. To apply such a simple analysis to this problem and to suggest that improved knowledge and better services represent an adequate response is to deny the complex effects of social and cultural dislocation which may manifest themselves in unhealthy behaviours and greater health risks. It also imposes a particular cultural definition of health which may be inappropriate in the circumstances.

By adopting an extended framework and making considerable use of cross referencing, this report responds to the complexity of meeting the challenge of improving the health of all Australians. At the same time, clear recognition is given to the limitations of such an analysis and of the availability of information and indicators on which to set targets across the wide spectrum required.

No hierarchy of outcome or action is implied in the way in which targets have been arranged, nor, at this stage, is priority accorded to the individual goals and targets.

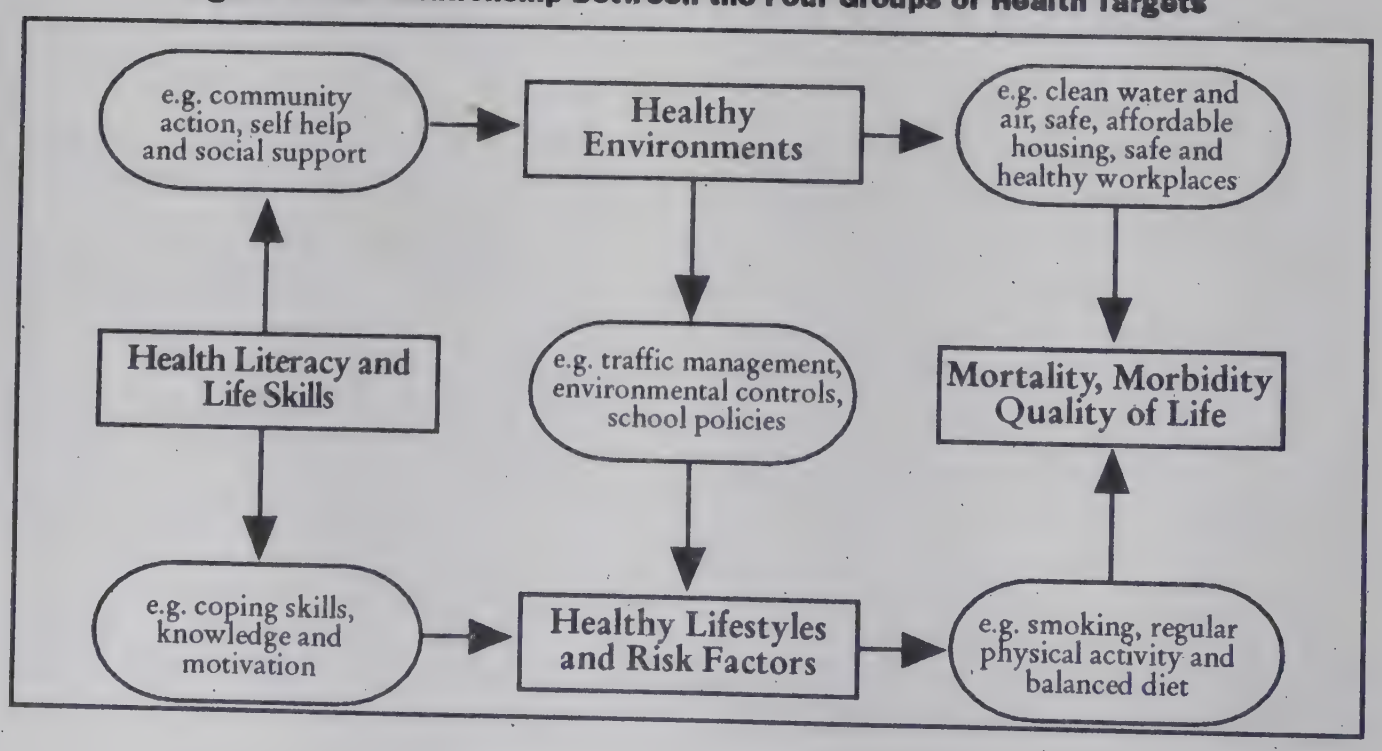
The goals and targets have been grouped as follows:

- preventable mortality and morbidity;
- healthy lifestyles and risk factors;
- health literacy and health skills; and
- healthy environments

A fifth group examines opportunities to develop separate but related targets for the health care system, and considers the challenge of achieving the targets.

Figure 1 provides a schematic overview of the basic relationships between the four groups and corresponding targets.

Figure 1: The Relationship Between the Four Groups of Health Targets



Further information on the cross referencing, and how to access information in Section 2 of this report is contained in the Guide to Reading at the beginning of the next section.

Each of the goals and targets nominated in the four principal groups is preceded by a short statement of the need for action indicating the nature of the problem, and evidence of the scope for change. It is not practical, or necessary in most cases, to include a more detailed analysis of the scientific basis for action. A summary of content of the four principal groups is given below.

a) Preventable mortality and morbidity

The goals and targets in this group include all those that were considered in 1988, with several additions. Given that there have been only four years since the adoption of the initial goals and targets, the current analysis of leading causes of preventable mortality and morbidity in Australia is much the same as it was in 1988.

Examples of indicators which might be used to set targets in this group include mortality rates, morbidity prevalence, days of restricted activity, or time off work, and hospital/health service use. Special attention is given to differences in health status among population groups.

b) Healthy lifestyles and risk factors

The lifestyles and risk factors which contribute to increased risk of premature mortality and morbidity in populations have been included in this group, together with those behaviours which may contribute positively to health status. As in 1988, nutrition, physical activity, tobacco and other drug use and abuse are included along with immunisation and sun protection behaviour. Again, the targets are expressed so as to reduce differences in health status, by drawing attention to population sub-groups at greatest risk.

Examples of indicators that apply in this group include smoking prevalence, high blood pressure prevalence, and patterns of alcohol use.

c) Health literacy and health skills

This is the first of the new groups to be included in the revised framework. Levels of personal health knowledge and positive attitudes towards changing behaviour demonstrably influence people's ability to adopt healthy lifestyles, to access appropriate health services, and to act on information or advice about health. Specific knowledge about how to access primary health care may enable more effective use of the health care system, while skills in first aid have the potential to limit harm from injury. Examples of indicators which might apply in this group include knowledge of basic risks for heart disease, knowledge about the health care system, and skills such as basic first aid.

In addition to health literacy, people require life skills (resilience and coping) to enable them to cope with and adapt to life stresses, and to achieve mental wellbeing. Indicators that apply in this group include self esteem, access to assistance in coping with loss and grief, or opportunity to develop problem-solving skills.

Self help, self care, and social support are further categories in this group. People's ability to care for themselves, and their access to self help and social support are recognised as important factors in the achievement and maintenance of good health. Examples of indicators in this group include knowledge and skills to enable self care, opportunity to participate in self help groups, and access to adequate, appropriate social support.

d) Healthy environments

The 1988 Health Targets and Implementation Committee considered the evidence on the social and environmental determinants of health but did not respond by setting goals and targets relating to these. Since then there has been increasing evidence that these social and environmental determinants disproportionately impact

upon the most disadvantaged populations in our communities, and that change in these determinants could greatly reduce unjust inequalities in health. For these reasons goals and targets relating to healthy environments have been proposed in this report.

A sector-based approach to defining targets has been adopted, which makes explicit the nature of intersectoral action required to achieve the health goals and targets in this report. It is also advantageous in defining arrangements for accountability and monitoring.

The goals and targets are structured into six subgroups as follow:

- the physical environment;
- housing, home and community infrastructure;
- transport;
- work and the workplace;
- schools; and
- health care settings.

The chapter on healthy environments in Section 2 may be seen as a beginning rather than an end to the process of establishing goals and targets for healthy environments. A range of indicators has been proposed in these subgroups - reflecting the diversity of issues, and the paucity of health-related information which is collected within non-health sectors. Considerable further refinement of these proposals will be required.

e) The health care system

The 1988 goals and targets implied rather than specified roles for the health services in promoting health and preventing disease. This report proposes a progressive re-orientation of service direction to reflect the national health goals and targets. To this end, greater attention will need to be given to health outcomes - what health gain follows from investment in different services. This will require, in turn, a greater concern for the efficient use of resources and for the attainment of greater equity of outcomes.

Proposed targets in this chapter include those relating to the balance in service provision and access to services, as well as targets for health outcomes from service provision. As with the proposals relating to healthy environments, these proposed targets will require considerable attention and further refinement.

Developing and Refining the Framework 1.4.

This new framework was proposed in a progress report published in May 1992 which was then available until August 1992 for comment from interested groups and individuals. Meetings to discuss the progress report were organised through each State and Territory health department and involved discussions with health department officials, service managers and providers, and a range of government and non-government organisations. Copies were also sent to a wide range of peak consumer bodies and other health interest groups for comment.

A series of technical workshops addressed nutrition, injury, mental health, and the challenge of setting mutually acceptable targets for transport, work and the workplace, and schools.

The workshop participants were mainly experts from the sectors concerned. The purpose of the sector-based workshops was to identify where the health agenda fitted alongside current activity in that sector. As a consequence, this report now records where health and non-health sector interests coincide.

Participants in the technical workshops are listed in Appendix 2, together with a list of those who responded to the progress report. A separate summary of issues raised in the consultation is included as Appendix 3.

For each issue, substantial efforts have been made to involve experts, lead agencies, and interest groups in the development of the goals and targets. In this sense, the goals and targets reflect the collective wisdom of a wide range of groups and individuals with relevant experience and expertise.

For example, a National Health and Medical Research Council (NHMRC) Panel has been reviewing the Australian Dietary Guidelines, while a DHHCS committee has been developing a National Food and Nutrition Policy. Both these groups provided substantial advice on the goals and targets relating to nutrition.

Health goals and targets which relate to children and young people have been drawn up by the Child, Adolescent and Family Health Service, South Australia. Priority targets for women have been developed on advice from the Australian Health Ministers' Advisory Council (AHMAC) Subcommittee on Women and Health. The National Program for the Early Detection of Breast Cancer and the Organised Approach to Preventing Cervical Cancer have helped formulate targets in those areas.

The proposed targets relating to Aboriginal and Torres Strait Islander health are compatible with the interim set of National Aboriginal and Torres Strait Islander Health Goals and Targets.[35] These goals and targets are currently under consideration by Aboriginal and Torres Strait Islander communities and organisations, and when finalised will be read in conjunction with the proposals for national health goals and targets in this report.

It has not been possible to include all of the goals and targets proposed through these reviews and working groups (for example, there are more than 250 draft health goals and targets for Aboriginal and Torres Strait Islander people). However, the report does incorporate targets considered to be priorities by these contributing groups.

Section 2 of the report contains the full range of proposals for goals and targets grouped in the four major categories and for health services, as listed above.

1.5 How are the Goals and Targets to be Achieved? The Challenge of Implementation

The terms of reference from the DHHCS for this report did not require a developed strategy for implementation, nor the definition of priorities from the proposed goals and targets. However, the progress report included several undeveloped suggestions on the mechanisms needed to respond to the challenge of the national health goals and targets. This part extends the discussion initiated in the progress report, drawing on feedback from the consultation process. The chapter on challenges for the health care system in Section 2 separately considers the key issues as they relate to the health care system.

As previously indicated, for virtually all targets in this report there are existing strategies, programs or services. In a small minority of cases this response may already be sufficient to achieve a target, but in most cases it will not. Part of the purpose of proposing targets is to stimulate assessment of the cost and effectiveness of existing actions, and to identify whether the existing scope and direction of the responses match the challenge of the targets.

At the very least, it is clear from an examination of the range of targets proposed here that their achievement will require collaborative effort between State/Territory and Commonwealth governments, non-government organisations, community groups, and individual citizens. Close consideration will need to be given to the most appropriate level and type of activity needed to achieve the targets. For many targets more than one strategy will be required. Such detailed analysis, target by target, is beyond the terms of reference for this report.

35 Wronski I and Smallwood G. 1991. *Aboriginal and Torres Strait Islander Health Goals and Targets* (Interim). Aboriginal and Torres Strait Islander Commission, Canberra.

An Issues Paper on promoting health is currently being prepared as a part of the NHS. That paper will be action oriented and will draw upon many of the important themes in this report - including issues of equity in health, the balance of individual and collective action for health, health service reorientation, and intersectoral collaboration. It should provide guidance on strategies to achieve many of the national health goals and targets and may also identify further national priorities for action.

1.5.1 Clear Articulation of National Health Priorities

The goals and targets in this report cannot all be matters of priority for all agencies at the same time. The proposals in Section 2 are best viewed as a menu from which Commonwealth and State governments can identify national (and State) priorities for action. National non-government organisations and locally-based community groups with more narrowly defined interests will also be able to select from this menu the targets most relevant to their interests.

From this menu, some of the major national priorities for health advancement have already been articulated through the 1992 federal budget statement. This statement refers to several subject areas and population groups that feature in the proposed national health goals and targets. Table 1 indicates some of these issues.

As indicated in the previous chapter, the targets relevant to these national priorities should not be seen as the basis for evaluation of any of the individual programs listed above. However, the targets are benchmarks against which program strategies should be developed and progress viewed. The targets are end points, the result of actions taken by a wide range of government and non-government organisations, individuals, and community groups.

Recomm

A first step in the implementation of the national health goals and targets should be for the Commonwealth (and States/ Territories) to re-examine the definition of priorities within the health system. Priorities need to be set in circumstances where not all that might be done can be done. The approach being advocated is one which relates investment to health gain, or health

Table 1: National Priorities for Health Advancement 1992-93
Department of Health, Housing and Community Services

Focus	Subject Areas	Program Response
Content	Environmental Health Food and Nutrition Injury Control	National Health Advancement Program
	Alcohol Misuse Illicit Drug Use Smoking Pharmaceutical Misuse	National Campaign Against Drug Abuse
	AIDS	National HIV/AIDS Strategy
	Mental Health	National Mental Health Policy
Population Groups	Aboriginal and Torres Strait Islanders	National Aboriginal Health Strategy
	Women	National Women's Health Program Alternative Birthing Services Program National Program for the Early Detection of Breast Cancer Organised Approach to Preventing Cervical Cancer
	Youth	Innovative Health Services for Homeless Youth Program

outcome, as an important element in the determination of priorities. This will require careful appraisal of the costs and effectiveness of different strategies, both within and among programs designed for a common goal. The end result of such a process of re-examination should be a clear statement of national priorities, together with a strategy for implementation relating to relevant goals and targets.

In developing a strategy for implementation, attention should be given to the major lessons learned from the National Better Health Program, and to the recommendations of the Ministerial Panel on Evaluation. Particular attention should be given to the mechanism for co-ordination of national activity.

In determining priorities for future action, recognition will need to be given to the magnitude of a particular problem, in terms of the number of people affected and the impact on quality of life, compared to the current level of investment in its prevention and/or amelioration. As a part of this, attention will also need to be given to issues of cost and effectiveness - making judgements about how marginal increases in investment could be directed to those interventions that are likely to give the greatest health gain.

The new National Health Advancement Program is currently developing strategic action plans in defined priority areas. Current reviews of the National Campaign on Alcohol and Drug Abuse and of the National HIV/AIDS Strategy also offer the opportunity to consider the appropriateness of current strategies in relation to priority goals and targets. The AHMAC Sub-committee on Women and Health has already contributed substantially to the development of the goals and targets in relation to women's health. This Subcommittee is now converting the proposals into a strategy for implementation.

These are all important developments which could clearly be directed towards the achievement of the national health goals and targets.

Identification of Lead Agencies 1.5.2

Achievement of the national health goals and targets will require strong leadership. In the instances highlighted above this leadership may come through instruments of government, whether directly through a Commonwealth department, or, as in the case of the AHMAC Subcommittee on Women and Health, through another Commonwealth/State partnership.

Recommend

Where possible, a lead agency within government should be identified as having a defined responsibility for monitoring and accounting for progress toward the achievement of relevant targets.

In many other cases, the leadership required to achieve individual goals and targets will not be easily identifiable within existing government structures. In such cases, non-government organisations may have a significant role in providing that leadership, and in galvanising action towards commonly agreed national health goals and targets which are relevant to their identified interests. For example, Diabetes Australia, under the guidance of the NHMRC Expert Panel on Diabetes, is developing a National Action Plan to achieve an extended set of national health goals and targets for diabetes derived from the relevant proposals in Section 2 of this report. That document is being developed in conjunction with a full range of interested groups including those in the community with diabetes, governments, clinicians, educators, and the pharmaceutical industry.

The DHHCS has supported an initiative to develop a set of national health goals and targets specifically for children and young people. This work has been undertaken by the Child, Adolescent and Family Health Service, South Australia (CAFHS). The final project report identifies the need for the continued development of a national child and youth health strategy which would incorporate child health goals and targets, the recommendations of the NHMRC Child Health Surveillance Working Party, and Australia's response to the United Nations Declaration on the Survival, Protection and Development of Children in the 1990s.

These are examples of how the goals and targets proposed in this report have been developed by individuals and groups from a variety of organisations with relevant expertise. These organisations can then act as catalysts for action to pursue the achievement of the relevant goals and targets.

Recommend *As a further step in the implementation of the national health goals and targets the Commonwealth should collaborate with national non-government organisations who could take responsibility for developing a strategic national response to the relevant goals and targets proposed in Section 2 of this report. Such a response could include further refinement and extension of the targets if necessary, and more importantly, the development of action plans for their achievement. Again, attention will need to be given to the mechanism(s) for co-ordinating such activity, and for reviewing and reporting on progress.*

1.5.3 Special Focus on Healthy Environments

Environmental health is a priority for the new Commonwealth National Health Advancement Program.

In developing goals and targets for healthy environments, attention has been given to the common ground between the health interests expressed through the health goals and targets, and the legitimate interests of other sectors such as transport and education.

In this report the proposed health goals and targets for housing, transportation, work, and schools, for example, have all been developed following discussion with these sectors. Despite considerable progress, the proposals are still at a comparatively early stage of development and far from a finished product. The DHHCS should continue to develop these proposals in dialogue with these other sectors.

Recommend *The DHHCS should continue to build upon existing opportunities for collaborative work across sectors. Current opportunities include:*

- *clear articulation of the health impact of housing as a follow-up to the National Housing Strategy;*
- *further definition of standards from which targets can be set for the physical environment through the work of the NHMRC Environmental Health Committee. This Committee could also be encouraged to develop a national action plan for monitoring and implementing strategies relating to its defined areas of responsibility;*
- *support for the further development of goals and targets for work and the workplace and a strategy for implementation by Worksafe Australia within their three corporate strategic priorities for occupational health and safety;*
- *co-operation in the development of a common national curriculum on health currently being developed by the Australian Education Council; and*
- *exploration of the interface between Healthy Cities projects across Australia, and the Better Cities project with a view to enhancing the effect of both.*

1.5.4 Developing a Public Health Infrastructure

The technical refinement of the goals and targets, development of new health indicators, the measurement of progress towards the achievement of targets and, in many cases, the co-ordination of action to achieve them, will depend on the quality of the public health workforce in Australia. Such a workforce not only needs technical skills, but also the ability to apply those skills to the achievement of the goals and targets.

Recom *Current arrangements for funding of public health education and research, the Public Health Education and Research Program, are being reviewed by the Commonwealth. Part of this review should involve consideration of how this investment in education and research will meet both the technical needs of target development, measurement, and monitoring among priority populations, and the need to develop and implement strategies to improve health among the priority population groups.*

This will not only involve supporting existing institutions to undertake general public health training and research as a contribution to

workforce development, such as through existing Master of Public Health programs, but must also include support for institutions to develop as specialist centres with responsibilities in relation to the goals and targets (technical research and/or implementation). Demonstration projects which can explore opportunities for States/Territories to link the national health goals and targets to statewide, regional and local activities might be supported. This latter point has great importance in relation to health service reorientation which is explored more fully in Chapter 2.5.

5.5 Training and Professional Development

As well as the specific need to further support the development of an effective public health infrastructure and a specialist public health workforce, the achievement of the national health goals and targets has profound implications for workforce education and training more generally. There is an additional need to strengthen education for non-public health professionals in those aspects of public health which reflect an outcome orientation to management. This is critical to the reorientation of the health service toward the efficient delivery of programs of demonstrable outcome effectiveness, and is explored more fully in the chapter on challenges for the health care system in Section 2.

Among the more important education challenges which are raised, directly and indirectly, through the definition of national health goals and targets are:

- the importance for all health professionals of fully recognising a population perspective to health, particularly in understanding the underlying social and environmental determinants of health, and ways in which these act to affect the health of vulnerable groups in society;

- the need to achieve a balance between the traditional emphasis on doing things right (quality assurance), and whether the right thing was done on the basis of the best health outcome - a reorientation from process to outcome;

- the need to equip health professionals with the knowledge and skills to capitalise on day-to-day opportunities for prevention and early intervention with patients and clients; and

- the importance of health professionals developing skills in communication, of informed dialogue, and in developing partnership in decision-making between professionals and their clients or patients. This is particularly important in recognising social and or cultural sensitivities among many of the disadvantaged groups identified in this report.

Most institutions with responsibilities for education and training of health professionals recognise these important issues and, in many cases, are taking action to address them.

Recommend

Such a process might be assisted by a more substantial, co-ordinated approach to professional development based on the explicit statement of educational objectives, and the development of relevant educational materials and learning environments in collaboration with relevant health and education professionals. This could be initiated, piloted, and evaluated for use through a limited number of demonstration projects Australia wide. The DHHCS should take the lead in promoting such demonstration projects.

Monitoring and Accountability 1.5.6

One obvious lesson from the review of the National Better Health Program was that without a clear mechanism for defining accountability and a systematic approach to monitoring and formal reporting, the goals and targets will remain an interesting set of proposals with no bite.

Given the analysis in the report which examines both the immediate and underlying causes of ill health in the community, it is unreasonable to expect that any individual program or service be held accountable for the achievement of targets. Nevertheless, without accountability and responsibility, the weight of historical funding and the pressure of existing management arrangements within

the health care system will overwhelm any good intentions that may be embodied in the goals and targets. Even if individual workers and programs are not to be held accountable for the achievement of the goals and targets, a clear mechanism for accountability must be defined.

The preferred approach to accountability will be a clear acknowledgment of the need for programs - national, State or local - to be demonstrably oriented towards the achievement of the goals and targets. For example, in the case of the heart disease goals and targets, those responsible for the management of health promotion, the provision of cardiac services in hospitals of different levels, general practitioners, and others who manage patients and clients, need to be held corporately accountable for the expenditure of monies on cardiovascular health. Without tethering resource allocation to achievement in regard to at least some aspect of the goals and targets, nothing different will happen.

Because of the comprehensive way in which the goals and targets have been defined, taking a social view of health, it follows that accountability for the achievement of the national health goals and targets cannot rest with the health sector alone. Achieving the targets will require action beyond the health sector. For this reason, accountability for the goals and targets should be ultimately viewed as a governmental and societal responsibility, albeit with the health sector having a leading role.

Recommend

To this end, there should be regular reports by governments (Commonwealth, State and Territory) to their parliaments on the state of the health of their people, and on progress toward achieving the national health goals and targets. The national report, in turn, should be passed on to the World Health Organization as a part of the Australian commitment to its Health for All Strategy.

At present, the Australian Institute of Health and Welfare (AIHW) provides a biennial report to Government on the nation's health. This biennial report should form the basis for presenting data relating to accountability in the achievement of goals and targets. The AIHW should take the lead role in reporting on progress towards the achievement of the expanded range of health goals and targets. Data collections must be expanded and refined for this purpose. This may require some re-definition and re-orientation of the work program of AIHW and may, in turn, have resource implications for that organisation.

A similar, formal requirement at State/Territory level, to report on health status to parliament, should also be established and such a system might even be translated further, covering a more limited range of targets at area/regional/local community level.

As well, non-government agencies should be encouraged to monitor progress in relation to individual health problems, or for health status in relation to population health sub-groups, or for aspects of healthy environments. Thus, the National Heart Foundation might oversee the monitoring and reporting on progress on the goals and targets relating to heart disease, although the actual collection of data might occur through statutory organisations. Similarly, organisations such as the Cancer Councils, National Asthma Campaign, and Diabetes Australia could perform such functions.

Recomm

Such an approach should be supported and formalised through the new National Health Advancement Program with non-government organisations taking on this reporting responsibility as a part of an agreed lead agency role.

1.6 Closing Information Gaps

Identifying indicators and developing targets using available baseline data has brought to light several problems with the quality and range of health information in Australia, and in the availability of national information. Despite large improvements in the national health information base in the years since the publication of the first set of goals and targets, there are still major gaps in the data.

Many of these gaps will be evident from the detail of individual targets, but some more general gaps can be highlighted. These include the need for:

- improved information (and access to information) on many of the social and environmental health indicators which have been used in the development of targets in the report, especially those in the Healthy Environments and Health Literacy and Health Skills chapters;

- information on the costs and benefits of different strategies to promote and maintain health, including clinical and diagnostic services;

- improved national population data on the incidence and prevalence of disease and risk factors;

- improved data on the health of population subgroups - especially Aboriginals and Torres Strait Islanders, and people from non-English speaking backgrounds; and

- long term and co-ordinated monitoring systems which facilitate the measurement of change in health-related indices over time.

In many cases our basic understanding of the causes of diseases and ill health, or of the scope for improving health, is limited. Continued basic research is also required. Such basic research is not only biomedical in nature, but also draws upon the social sciences, for example in improving understanding of the relation between socioeconomic status and health, or understanding ways in which to reduce violence in society.

Recommend

Opportunities exist for a re-examination of current patterns of investment in health research and the collection of health-related data. The AIHW now has revised functional arrangements and could be expected to provide leadership in the further development of a co-ordinated monitoring system which will enable longer-term assessment of progress towards the targets.

The National Health Information Agreement is currently being developed to provide a mechanism to consolidate and unify the development of national health information. It would be beneficial if this concentrated on outcomes from the provision of health care services as well as inputs into it, and thus served to inform resource allocation decisions with data on health gain, effectiveness, and efficiency.

The future direction of the Public Health Education and Research Program (PHERP) is currently being reconsidered by the Commonwealth. While this program is primarily directed towards providing support for institutions which are engaged in education and workforce development, future investment might be more substantially directed to reflect national priority needs in public health research, and specifically the challenge of achieving the goals and targets.

This process would need to recognise the different requirements for fundamental research on the one hand, and on the other, for the development of a co-ordinated infrastructure for health data collection and management.

SECTION 2

National Health Goals and Targets

SECTION 2

National Health Goals and Targets

This section of the report describes the National Health Goals and Targets. In setting the targets, several specific problems have been encountered, and the strategies which have been used to solve them are indicated below.

a) Definition of a target

The term target is used inconsistently in the literature. In this report it has a highly specific definition which requires:

- a priority population (generally defined by age, gender, ethnicity, Aboriginality, socioeconomic status, location of residence);
- a relevant numerical indicator;
- a recent baseline measure of that indicator for the priority population; and
- an estimate of achievable change by the year 2000, and where appropriate, interim years to the year 2000.

Where all this information is currently available it has been possible to set **targets** which define the size and direction (increase/reduction) of change in a specific health indicator for a defined population. The paucity of available information on population subgroups has often impeded the development of a more substantial range of targets. This is indicated by the sub-heading **proposed targets** where a target is considered desirable but cannot currently be set because of the paucity of data.

b) Target dates and definition of change

The timing, level, and nature of change specified currently vary among targets. Most have been set for 2000. This timetable has some advantages, particularly as serial data, such as the National Heart Foundation Risk Factor Survey and the Australian Bureau of Statistics National Health Survey, will be collected again in 1995 and 2000.

However, there are a number of organisations or national programs with well developed targets and timetables upon which this report has drawn. This has meant the inclusion of interim targets which accord with those of the organisations or programs responsible for specific areas. For example, time-specific targets for immunisation against mumps, measles, and rubella (MMR) were endorsed by the NHMRC Communicable Diseases Standing Committee in June 1992. The immunisation section therefore includes targets for 1994, 1996, and 2000. The National Heart Foundation has developed targets for 2000 and 2010, the Organised Approach to Preventing Cervical Cancer has set targets for cervical screening for 1995 and 2000, and the National Program for the Early Detection of Breast Cancer has set targets for 2000 and 2005. These have all been included in this report.

The targets have been set in two ways, again, largely reflecting the definition of indicator, source of the target, and/or the baseline data.

Some, with baselines expressed as percentages, reflect the **absolute** level of change which is proposed for the given period, for example, to increase the percentage of female secondary school students who have never smoked to 75%.

Others, in which the baselines are generally expressed as a rate, for example, 10 per 1000, reflect the relative level of change which is proposed within the given period. This will be expressed as a **proportional** change, for example, to reduce perinatal mortality rates by 50%.

For some issues covered within the current framework baseline data are available, but current research does not provide the evidence to identify the preventable fraction. Thus, for example, considerable difficulty has been experienced in predicting by how much one might reduce the prevalence or incidence of chronic conditions such as arthritis, and sight and hearing disorders through prevention. Predicting achievable change in mental health problems and disorders, and in many of the issues raised in the chapter on healthy environments, has not been possible. The proposed targets in these areas highlight the need for further research in order to enable development of specific targets in the future.

c) Refinement of current targets

To a certain extent, all targets in this report should be subject to further examination and refinement over time. They are not once-and-for-all-time statements, and will need to be modified on the basis of progress (or lack of it) toward their achievement, and as new information comes to light.

Targets might also be refined in the future to account more explicitly and systematically for secular trends, and for demographic changes. For example, some of the current targets might be achieved simply by the continuation of recent trends, many of which are occurring for poorly understood reasons. With injury, for example, most of the necessary trend analyses have not yet been done, but they will be quite soon. There is need, too, for further refinement of data to enable specification of age-specific rates stratified by other equity dimensions. This, together with the results of trend analyses, could then be used in the development of subsequent goals and targets.

d) Framework and structure

This Section includes four chapters of health goals and targets, and a fifth chapter which considers their application to the health care system.

2.1 Preventable mortality and morbidity

2.2 Healthy lifestyles and risk factors

2.3 Health literacy and health skills

2.4 Healthy environments

2.5 Health care system

As a general pattern each group of targets contains the following:

Need for Action
A short statement outlining the nature of the problem and scope for addressing it

Goal
A general long term aspiration

Targets
Clearly defined, time-related, targets for change within a specific priority population group

Proposed Targets
Indication of issues on which it is considered desirable to set a target, but for which no suitable baseline data have been found

Cross Reference Targets
Other related/relevant targets

e) Guide to reading Section 2

While the conceptual framework used to develop the goals and targets enabled analysis of many of the determinants of health and disease and there are links between each group, the framework is **not** a hierarchy. Each group of goals and targets is discrete, representing important areas for action in their own right. Different readers, working from different starting points, will wish to begin with different groups of goals and targets.

However, to assist the reader to identify the connections among the groups (and subgroups) of the goals and targets, **Cross Reference Targets** have been specified at the end of each subgroup.

For example, the cross reference targets listed with *Perinatal and Infant Mortality* are:

Sexually transmitted diseases, Teenage pregnancies and births, Childbirth, Developmental disability, Diet and nutrition, Breastfeeding, Smoking, Alcohol misuse, Health literacy, Self help, Social support.

and those listed with *Motor Vehicle-related Injury* are:

Alcohol misuse, Mental health problems and disorders (Organic mental disorder), Safety behaviours, Health literacy, Safety skills and first aid, Transport, and Schools.

The cross reference targets are intended to help identify additional goals and targets, the achievement of which would be likely to contribute positively to the achievement of the targets of immediate interest.

Each target has its own **priority population**. Different sources of baseline data have meant it has not been possible to standardise the definition of children or adults. However, each priority population has been specified in relation to the definition used by the source of the baseline data (usually by age) and/or by gender, ethnicity, Aboriginality, socioeconomic status, or location of residence.

Definitions of Aboriginals and Torres Strait Islanders, people with non-English speaking backgrounds (NESB), people with disability, and socioeconomic groups are used as they have been used in the source of the information upon which the targets have been based. This means that there may be some differences in the variables used in the definitions. For example, low socioeconomic groups may have been defined by levels of education, occupation, and/or income.

It is also important to recognise that within all population groups identified in this report, there are differences in language, social norms, and culture. This point is particularly relevant in reference to people of non-English speaking background, and to the Aboriginal and Torres Strait Islander populations. Such differences will need to be addressed by those working to achieve targets with those groups.

The terms rural and isolated, too, have been used as defined by the sources of baseline data. No standardisation has been possible.

Complementary national health goals and targets have been developed with and for specific population groups - Aboriginals and Torres Strait Islanders, children and young people, and women. These include suggested strategies together with goals and targets,

and will provide readers with additional information.

The interim set of *National Aboriginal and Torres Strait Islander Health Goals and Targets* is currently under consideration by Aboriginal and Torres Strait Islander communities and relevant organisations. When finalised, they will need to be read in conjunction with the National Health Goals and Targets.

The *Health Goals and Targets for Australian Children and Youth* were published in September 1992 and are intended to represent priorities for those whose responsibility it is to care for children's health and the health of youth.

A report on *Health Goals and Targets for Women*, prepared by the Australian Health Ministers' Advisory Committee (AHMAC) Subcommittee on Women and Health (SCW&H), is currently being finalised and should be available early in 1993.

CHAPTER 2.1

Preventable Mortality and Morbidity

Cardiovascular Mortality and Morbidity

2.1.1

Need for action

Cardiovascular disease (comprising coronary heart disease, stroke, and vascular disease) remains the leading cause of death in Australia, accounting for 46% of all deaths. Although age standardised death rates from cardiovascular disease have declined by 46% in males and 43% in females since 1968, they remain high when compared to those of many other countries, indicating room for further improvement.

The mortality rate for males is significantly higher than that for females. At least some of the reason for the difference is biological. A further significant proportion of the difference is attributable to the greater prevalence of smoking among males, at least until recently. As the prevalence of smoking among males declines, it is likely that there will be some narrowing of the difference in cardiovascular disease mortality rates between males and females.

The most disadvantaged socioeconomic groups not only had higher mortality rates in 1968, they also experienced smaller declines over the 20 years to 1988. The gap between the rates of high and low socioeconomic groups has widened.

In 1985, the leading cause of death for both male and female Aboriginals and Torres Strait Islanders was diseases of the circulatory

system (including heart disease and stroke). In that year, Aboriginal or Torres Strait Islander death rates due to diseases of the circulatory system were 2.2 and 2.6 times higher than the age-adjusted Australian rates, while for young and middle-aged Aboriginals and Torres Strait Islanders, they were between 10 and 20 times higher[36].

In Australia, reductions in levels of three risk factors, smoking, high blood pressure, and high blood cholesterol, have been estimated by Dobson (1987) to account for 75 per cent of the decline in Australian heart disease death rates among females in their 50s and for 40 to 50 per cent among males in their 40s[37]. There is evidence that at least three of the major risk factors for cardiovascular disease - smoking, physical inactivity, and blood pressure levels - are higher among low socioeconomic groups.

Effective prevention and health promotion measures have had an impact on cardiovascular disease mortality and probably on morbidity, although rising morbidity among older people may reflect growing success in postponing death from cardiovascular disease. Primary prevention needs to be extended and intensified to ensure that all socioeconomic and ethnic groups share in the decline in heart disease mortality.[38] Further, prevention of cardiovascular disease among older people (those aged 65-74 years and those over 75 years) may also be of benefit, although the goals here will emphasise reductions in morbidity as well as mortality.[39]

Goal

To reduce mortality from and the impact of cardiovascular disease on the population

Targets

(adapted from *Heart Health 2000*. 1990. National Heart Foundation)

Priority population: Men 30-64 years	**level**	**year**
To reduce mortality from heart disease	-30%	2000
Baseline: NHF 1986: 145/100,000	-50%	2010
Priority population: Women 30-64 years	**level**	**year**
To reduce mortality from heart disease	-25%	2000
Baseline: NHF 1986: 44/100,000	-45%	2010
Priority population: Men 30-64 years	**level**	**year**
To reduce mortality from stroke	-60%	2000
Baseline: NHF 1986: 23/100,000		
Priority population: Women 30 - 64 years	**level**	**year**
To reduce mortality from stroke	-55%	2000
Baseline: NHF 1986: 18/100,000		
Priority population: Aboriginals/Torres Strait Islander males 30 - 64 years	**level**	**year**
To reduce mortality from circulatory disease to that of the non-Aboriginal population	-55%	2000

Reference: Thomson N. Recent trends in Aboriginal mortality. 1991. Medical Journal of Australia. 154:235-239. Diseases of the circulatory system. Aboriginal Mortality: Males 3.4 per 1,000; Non-Aboriginal Mortality: Males 1.5 per 1,000

36 Australian Institute of Health. 1990. *Australia's Health 1990*. Australian Government Publishing Service, Canberra. p 33.

37 Australian Institute of Health. 1990. Ibid, p. 52.

38 Australian Institute of Health. 1990. Ibid. p 54.

39 Simons L. 1989. Epidemiological comparisons in cardiovascular diseases in the elderly: international comparisons and trends. *American Journal of Cardiology*. 63:5H-8H.

Priority population: Aboriginals/Torres Strait Islander females 30 - 64 years	**level**	**year**
To reduce mortality from circulatory disease to that of the non-Aboriginal population	-60%	2000

Reference: Thomson N. Recent trends in Aboriginal mortality. 1991. Medical Journal of Australia. 154:235-239. Diseases of the circulatory system. Aboriginal Mortality: Females 2.5/1,000; Non-Aboriginal Mortality: Females 1 per 1,000

Proposed targets

Priority populations:
Males 30 - 64 years from low socioeconomic groups
Females 30 - 64 years from low socioeconomic groups
To reduce mortality from cardiovascular disease to that of higher socioeconomic groups

Priority population: Women 50+ years
To reduce mortality from circulatory diseases

Priority population: Aboriginals/Torres Strait Islanders 5 - 16 years
To reduce the incidence of new cases of rheumatic carditis
Provisional baseline: Acute rheumatic fever 21.6/1000, Chronic rheumatic carditis 13.5/1000;
Dr R Streatfield, Queensland Health Department, Peninsula and Torres Strait District, unpublished observations

Priority population: Women 15 - 44 years
To reduce the incidence of stroke and vascular disease among those who smoke and use the oral contraceptive pill

Priority population: New immigrants 30 - 64 years
To prevent an increase in cardiovascular mortality with increasing length of residence in Australia

Priority population: Adults 65 years or more
To reduce the morbidity and disability associated with cardiovascular disease, peripheral vascular disease, and stroke

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Diabetes	Diet and nutrition, Overweight and obesity, Physical activity, High blood cholesterol, High blood pressure, Smoking	Health literacy, Life skills and coping, Safety skills and first aid, Self care, Self help, Social support	Transport, Work and the workplace, Schools, Health care settings

2.1.2 Preventable Cancer Mortality and Morbidity

Cancer remains the second most common cause of death in Australia, accounting for 25% of all deaths in 1988 (the most recent figures available). It is the only major cause of death in Australia which is increasing in both sexes - largely as a result of smoking-related cancers, but to a lesser extent as a manifestation of diminished competing causes of death, especially cardiovascular disease.

Overall, about one-third of cancer deaths can be attributed to tobacco and another 3% to alcohol. Risk factors associated with sexual behaviour and reproductive patterns account for a further 7% of deaths and about 4% may be due to occupational exposure.[40] Australian skin cancer rates are the highest in the world, and the age-standardised death rate for skin cancer among males appears to be increasing.[41]

Action to reduce the prevalence of cigarette smoking and to encourage people to protect their skin from the sun are primary preventive measures. A prudent approach to diet may well protect many people from cancers which would otherwise develop, but clear evidence for this will be difficult to obtain in the short term.

Early detection or secondary prevention of cancer has been shown to be effective in reducing mortality from breast and cervical cancer while secondary prevention is also important in the early detection of skin cancers.[42]

a) Cervical Cancer

Need for action

Despite epidemiological evidence linking very substantial reductions in cervical cancer mortality with regular screening (Pap smears), cervical cancer remains the sixth most common cancer among women. Cervical cancer incidence has increased slightly over the past two decades but mortality has decreased from 6 per 100,000 women in 1970, to 3.5 per 100,000 women in 1987.[43] Its personal and social impact is high.[44]

Death from cervical cancer has long been known to be associated with low socioeconomic status. At present, it is likely that this association is at least partly attributable to lower uptake of cervical screening by women of lower socioeconomic status. Access to the provider of choice, especially female practitioners, is known to be a significant factor in participation in screening. Of particular concern are Aboriginal women. In the Northern Territory 1979-83, the death rate from cervical cancer among all Aboriginal women was more than six times the rate among Australian women. Screening rates were low.[45] There is considerable evidence in Australia identifying barriers to participation in screening. These include discomfort, embarrassment, forgetfulness, dislike of the procedure, and fear.[46] However, it is not possible to predict the extent to which the perceived barriers affect future behaviour.

40 Australian Institute of Health. 1990. *Australia's Health 1990*. Australian Government Publishing Service, Canberra. pp 57-58.

41 Australian Institute of Health. 1990. Ibid, p 62.

42 Australian Cancer Society. 1991. *National Cancer Prevention Policy*. Australian Cancer Society, Sydney. p 1.

43 National Better Health Program. 1989. *Preventable Cancers: Monitoring Targets Towards 2000*. Australian Institute of Health, Canberra.

44 Australian Health Ministers' Advisory Council. Cervical Cancer Screening Evaluation Steering Committee. 1991. *Cervical Cancer Screening in Australia: Options for Change*. Australian Institute of Health: Prevention Program Evaluation Series No 2. Australian Government Publishing Service, Canberra. p 19.

45 Australian Health Ministers' Advisory Council. 1991. Ibid, p 22.

46 Australian Health Ministers' Advisory Council. 1991. Ibid, pp 42-43.

Figure 2: Incidence of cervical cancer compared to Pap smear screening rates in Australia

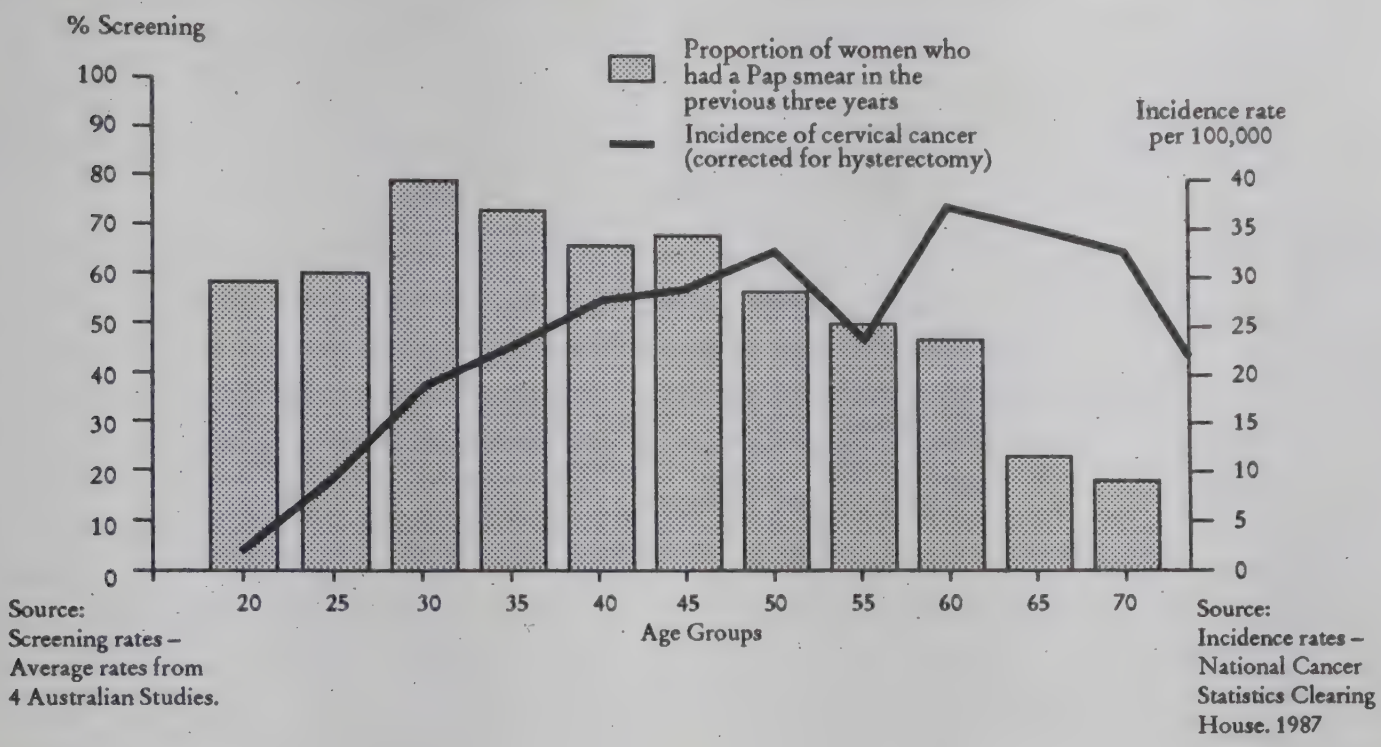


Figure 2 illustrates the relationship between the age-specific incidence of cervical cancer mortality and age-specific screening rates.

There is also some evidence that Human Papilloma Virus infection and cigarette smoking - both of which are amenable to prevention[47] - are risk factors for cervical cancer.

In June 1992, all Australian health ministers endorsed the Organised Approach to Preventing Cervical Cancer. This Approach calls for much more comprehensive recruitment strategies, including reminder systems, quality control, more adequate processes of follow-up, and the provision of more user-friendly and culturally-appropriate services. An evaluation framework for this program is being developed.

Goal	Target		
To substantially reduce mortality and morbidity from cervical cancer	**Priority population: Women 18 - 70 years who have been sexually active and have a uterine cervix (i.e. have not had a total hysterectomy)**	**level**	**year**
	To reduce mortality and morbidity from cervical cancer	-30%	2000
	Baseline: AIH. National Better Health Program. Preventable Cancers. 1987: 3.5/100,000		
	Proposed Target		
	Priority populations: **Women 50 - 70 years** **Women 18 - 70 years from low socioeconomic groups** **NESB women 18 - 70 years** **Aboriginal/Torres Strait Islander women 18 - 70 years** **Women 18 - 70 years who live in rural and remote areas** **Women 18 - 70 years with disabilities** To reduce mortality and morbidity from cervical cancer		

47 McMichael AJ & Hiller JE. 1989. Pills, partners and preventive prospects: in-situ cancer of the cervix. *Medical Journal of Australia*. 150: 114-116.

Cervical screening

Need for action

There is now good evidence that, for women in specified age groups, cervical screening is an effective means of reducing premature mortality and morbidity from cervical cancer.

Achieving high levels of participation in a screening program is probably the single most important factor in reducing the incidence of invasive cancer of the cervix.[48] The National Cervical Cancer Screening Policy has recommended that women 18-70 years have a Pap smear at two yearly intervals. Based on the Policy, a nationally organised approach is being undertaken to increase the number of women in the recommended age range who have regular Pap smears.

The Policy also states that Pap smears may cease at the age of 70 years for women who have had two normal Pap smears within the last five years. Women over 70 years who have never had a Pap smear, or who request a Pap smear, should be screened.[49]

Several Australian studies have found that rates of participation in screening declined in older age groups.[50 51 52 53] Armstrong et al and Shelley also found that women speaking a language other than English at home, or who were from low socioeconomic groups, were less likely to have had regular Pap smears. Rural women were less likely to have regular Pap smears than residents of urban areas and female GPs tended to take more Pap smears than their male counterparts. Aboriginal women are less likely to have regular Pap smears than non-Aboriginal women.

However, there is evidence in Australia that programs aimed at increasing women's participation in cervical cancer screening have resulted in higher proportions of women having at least one Pap smear during the last three years.[54]

Goal

To increase the proportion of adult women who regularly undergo cervical screening

Target

Priority population: Women 20 - 69 years	level	year
To increase the proportion who have a biennial Pap smear	75%	1995
	>95%	2000

Baseline: Australian Cancer Society. 1991. National Cancer Prevention Policy 1988: 64%

Proposed Target

Priority populations:
Women 50 - 69 years
Women 20 - 69 years from low socioeconomic groups
NESB women 20 - 69 years
Aboriginal and Torres Strait Islander women 20 - 69 years
Women in rural and remote areas 20 - 69 years
Women with disabilities 20- 69 years
To increase the proportion who have a biennial Pap smear

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48 Shelley JM. 1991. *Women's Participation in Pap Smear Screening in NSW*. PhD Thesis, University of Sydney, NSW. p 4.

49 Cervical Cancer Prevention Taskforce. 1991. *Screening for the Prevention of Cervical Cancer*. Department of Health, Housing and Community Services, Canberra. p 3.

50 Armstrong BK, Rouse IL and Butler TL. 1986. Cervical cytology in Western Australia. *Medical Journal of Australia*. 144:239-247.

51 Mitchell H & Medley G. 1987. Age trends in Pap smear usage 1971-1986. *Community Health Studies*. 11: 183-185.

52 Shelley JM. 1991. Ibid, p 49.

53 Hill D, White V, Borland R & Cockburn J. 1991. Cancer-related beliefs and behaviours in Australia. *Australian Journal of Public Health*. 15(1): 14-23.

54 Australian Cancer Society. 1991. *National Cancer Prevention Policy*. Australian Cancer Society, Sydney. p 55.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Sexually transmitted diseases	Smoking, Healthy sexuality	Health literacy, Life skills and coping, Social support	Transport

b) Breast Cancer

Need for action

Breast cancer is the most common cause of cancer-related deaths in Australian women. The incidence of breast cancer rises with age, being most common in older women. In 1988 more than 2000 deaths were recorded. In contrast to cervical cancer, the incidence of breast cancer is higher among females of higher socioeconomic status.[55]

As we do not know how to prevent breast cancer, there is little scope for primary prevention at present, although research relating to diet and oestrogen levels is proceeding. The best approach at present for reducing the incidence of breast cancer lies with early detection and intervention. Data pooled from randomised controlled trials in several countries have shown that mammography screening can reduce breast cancer mortality among women aged 50 years or more, although reductions in all-cause mortality are not as compelling, and the test is not without its downside. Drug trials based on the assumption that breast cancer is a systemic disease from a very early point in its natural history have yet to yield final results.

In Australia, the National Program for the Early Detection of Breast Cancer began in late 1990, with a brief to set up a national screening program actively recruiting women aged 50 - 69 years. It must be acknowledged that, with different rates of development of the screening program in different States and Territories, it will be some years before mammographic screening, even assuming widespread uptake, will manifest in reduced mortality rates.

Goal

To reduce mortality from breast cancer among the priority population

Target

Priority population: Women 50 - 69 years	level	year
To reduce breast cancer mortality	-10%	2000
	-15%	2005

Baseline: ABS Causes of Death, 1990: 72.8/100,000 women aged 50-69 years

55 Australian Cancer Society. 1991. *National Cancer Prevention Policy*. Australian Cancer Society, Sydney. p 46.

Breast screening

Need for action

There is now good evidence that, for women over 50 years or at high risk, breast screening is an effective means of reducing premature mortality and morbidity from breast cancer.[56] The relatively recent introduction of the National Program for the Early Detection of Breast Cancer means that there are only limited data available on the proportion of women who have had a screening mammogram. Hill et al[57] estimated that 12% of Australian women have had a mammogram, about half of whom said it was done as a 'routine check-up'.[58]

Another study of a sample of Sydney women's knowledge about, and attitudes to, mammography showed that only about half had heard of mammography being used for screening purposes, and that women who spoke a language other than English at home or who came from households where the main income earner was in an unskilled occupation were less likely to have heard about screening mammography.[59]

The National Program is available for all women aged 40 years or more, but is actively targeting women aged 50 - 69 years.

Goal	Proposed Target
To increase the proportion of women aged 50-60 years who undergo regular mammographic screening	**Priority population: Women 50 - 69 years** To increase the proportion who undergo regular mammographic screening *Reference: 1991. Australian Cancer Society. National Cancer Prevention Policy.*

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Diet and nutrition	Health literacy, Life skills and coping, Social support, Self help	

56 Irwig L, Cockburn J et al. 1991. Women's perceptions of screening mammography. *Australian Journal of Public Health*. 15(1): 24-32.

57 Hill D, White V, Borland R & Cockburn J. 1991. Cancer-related beliefs and behaviours in Australia. *Australian Journal of Public Health*. 15(1):14-23.

58 Hill D, et al. 1991. Ibid, p 22.

59 Irwig L, Cockburn J. et al. 1991. Ibid, p 30.

c) Skin Cancer

Need for action

Australian skin cancer rates are the highest in the world and it is the most common incident cancer in Australia. For females, age-standardised death rates have remained stable over the past three decades, while among males they have increased by about 25%. Melanomas are among the most common cancers in Australia and are responsible for 2.5-3% of all cancer deaths. The lifetime risk of developing melanoma is about 1 in 50 and the lifetime risk of developing other skin cancers approaches 70%.

There is no evidence of differences in rates of incidence of skin cancer or skin cancer mortality by socioeconomic status. There is evidence that exposure to sunlight in childhood is important in the development of both melanoma and non-melanocytic skin cancer.[60] Targets should reflect the geographical differences in incidence, as skin cancer is more common in northern Australia.

The ultraviolet component of sunlight is the major risk factor for skin cancer. Reducing exposure to sunlight, particularly during childhood and adolescence, has been suggested as an effective means of reducing the incidence of skin cancer. Early detection and treatment may prevent many deaths from skin cancer.

There are several problems which preclude the setting of short-term targets for skin cancer prevention. Preventive strategies may take several decades before a population effect is noted, and a lifetime reduction in exposure to ultraviolet radiation (UVR) may be required to reduce the incidence of, or mortality from, skin cancers. For this reason it has proved difficult to determine a specific target date for a reduction in skin cancer. A 20% reduction in exposure to UVR would result in 40,000 fewer non-melanocytic skin cancers and 1,250 fewer melanomas, with 84 and 249 fewer deaths respectively (estimates developed by Australian Cancer Society, 1990. p 30-31).

Goal	Proposed targets
To reduce the incidence of, and mortality from, skin cancer	**Priority population: All males** To reduce mortality from all skin cancers *Baseline: Australian Institute of Health. 1990. Australia's Health 1990. 1988: 9/100,000* **Priority population: All females** To reduce mortality from all skin cancers *Baseline: Australian Institute of Health. 1990. Australia's Health 1990. 1988: 3.8/100,000* **Priority population: Men 20 years or more** To reduce the rate of skin cancer mortality to that of women **Priority population: The whole population** To reduce the incidence of non-melanocytic skin cancer *Baseline: Australian Cancer Society. 1991. National Cancer Prevention Policy. 1989: 823/100,000* **Priority population: The whole population** To reduce the incidence of melanoma *Baseline: Australian Cancer Society. 1991. National Cancer Prevention Policy. 1989: 25/100,000*

60 English D, Armstrong B 1988 and Marks R, Lolley D, Lecatsas S, et al 1990. In: Australian Cancer Society. 1991. *National Cancer Prevention Policy*. p 29.

Priority population: All persons with melanoma
To increase the early diagnosis of melanoma (the proportion of melanoma cancers less than 0.76 cm thick at diagnosis[61])

Priority population: The population of northern Australia
To reduce the incidence of melanoma to that among the population of southern Australia

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Sun protection	Health literacy, Social support	Physical environment, Work and the workplace, Schools

61 An increase from 46% of melanomas detected early (thickness less than or equal to 75 mm) to 100% of melanomas detected early would save in the order of 600 lives annually (Australian Cancer Society 1990. p 32). A proposed target is that by the year 2000, at least 60% of treated (excised) melanomas should be at a thickness of 0.76cm or less (Ibid, p 34)

d) Lung Cancer

Need for action

Lung cancer is the most common primary cancer in Australian males, and the third most common in females. More than 30,000 Australians died of lung cancer between 1985 and 1989. Over the last three decades, mortality from lung cancer has increased threefold. Male death rates from lung cancer have declined since their peak in 1982 (68 per 100,000) to 63 per 100,000 in 1988, reflecting the declining prevalence of smoking among males in past years. The female death rate increased nearly six fold since 1945 to 17 deaths per 100,000 in 1988.[62]

Current lung cancer mortality trends reflect smoking prevalence over the preceding 15 to 20 years. For this reason, it has been predicted that lung cancer soon will overtake breast cancer as the leading cause of cancer death among women.[63] The same principle means that declines in smoking prevalence among males and females will not be reflected in decreasing mortality for many years. Among males there has been a fall in smoking prevalence from about 45% in 1974 to 30% in 1989. Among females there has been a fall from about 30% in 1974 to 27% in 1989.

A recent study in Melbourne showed significant differentials in lung cancer incidence and mortality across socioeconomic strata, those in the lowest decile having 40% more lung cancer than those in the highest decile.[64] Approximately three-quarters of the risk of developing lung cancer is attributable to tobacco smoking and there is evidence of higher rates of cigarette smoking among lower socioeconomic status groups. Higher exposure to work-related risks (for example, asbestos and coal dust) may also be linked with higher lung cancer mortality within these groups.

Among the Aboriginal population diseases of the respiratory system were the second leading cause of death for females and third for males in 1985. There is limited evidence that the prevalence of smoking among the Aboriginal population is higher than that among the non-Aboriginal population.[65]

Goal	Targets		
To reduce mortality from lung cancer	**Priority population: All males**	**level**	**year**
	To reduce mortality from lung cancer	-12%	2010*
	Baseline: 1990: 58.4/100,000 (Source: NCADA Draft Strategic Plan)		
	Priority population: All females	**level**	**year**
	To reduce mortality from lung cancer	-8%	2010*
	Baseline: 1990: 16.8/100,000 (Source: NCADA Draft Strategic Plan)		

* These targets have been set for the year 2010 because of slow development of the disease and the long delay in effect subsequent to a reduction in smoking rates.

62 Australian Institute of Health. 1990. *Australia's Health 1990.* Australian Government Publishing Service, Canberra. p 60.

63 Australian Cancer Society. 1991. *National Cancer Prevention Policy.* p 11.

64 Giles G, Hill D, and Silver B. 1991. The lung cancer epidemic in Australia, 1910-1989. *Australian Journal of Public Health.* 15(3): 247.

65 Brady M. 1991. Drug and alcohol use among Aboriginal people. In: Reid J & Trompf P, Eds. *The Health of Aboriginal Australia.* Harcourt Brace Jovanovich, Publishers, Sydney. p 202.

Proposed targets

Priority population: All Aboriginals and Torres Strait Islanders
To reduce mortality from lung cancer

Priority population: All people from low socioeconomic groups
To reduce lung cancer mortality to that of the highest socioeconomic groups
Reference: Giles G, Hill D, & Silver B. 1991. The lung cancer epidemic in Australia 1920 to 1989. Australian Journal of Public Health. 15(3):245-247

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Smoking	Health literacy	Physical environment, Housing, home and community infrastructure, Work and the workplace, Schools

e) Testicular Cancer

Need for action

Incidence data suggest that testicular cancer has increased in recent decades in Australia, perhaps more so than in other countries.[66] Its treatability, and the chance of cure if detected early, have led to trials of early detection methods by self-examination.

Goal

To increase the proportion of men with testicular cancer who present with it at an early point in its natural history (Stage 1)

Proposed Target

Priority population: Men 15 - 45 years	level	year
To increase the rate of early detection of testicular cancer	+30%	2000

Reference: Australian Association of Cancer Registries. 1987. Cancer in Australia 1982. Australian Government Publishing Service, Canberra

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Infertility	Health literacy	

66 Stone JM, Cruickshank DG et al. 1991. Trebling the incidence of testicular cancer in Victoria, Australia (1950-1985). *Cancer.* 68(1): 211-219.

1.3 Injury

While injuries are a major cause of preventable mortality and morbidity in Australia, they are the result of many different causes. Many of the effective avenues for the prevention of injury lie outside the health sector. In view of this, the structure of the goals and targets for injury reflect the major contexts and settings in which injuries occur.

Targets have been developed on the basis of the frequency of occurrence, severity of injury, potential for prevention, and the extent of social inequalities in occurrence. Targets addressing injury generally (all cause) are presented. Then, targets for the following injury groups, according to a list of contexts in which injury control may be achieved, are presented: transport; suicide and self-inflicted injury; interpersonal violence; residential; industry; product safety; sport and recreation; and in non-urban settings.

Infrastructure and information relevant to the control of injury occurring in these contexts are at different stages of development. This has influenced the number and nature of the targets concerning injury in these contexts.

Injury control targets or strategies have been developed already, or are under development, in some sectors. The National Road Safety Strategy, and interim Goals and Targets for Aboriginals and Torres Strait Islanders, have been taken into account when developing the targets in this Chapter. The road safety sector is particularly well-developed, and this is reflected in the numerous and specific targets proposed.

However, some administratively well-developed sectors with important potential for injury control have yet to develop injury goals and targets. For the purposes of this report, some general goals and targets have been proposed for these sectors, (for example, consumer affairs, sport), but more specific targets must be developed in collaboration with them.

Injuries occurring in some contexts have no clearly defined corresponding infrastructure devoted to their control (for example, injury in residential settings - both private dwellings and residential institutions), or have one that has emerged only recently (for example, farm-related injury). Targets for injury in these contexts may well need to be revised as the preventive infrastructures develop.

The health agencies of several State and Territory governments have released strategies for injury control, and others are working on them. Nearly all of these agencies now have an injury prevention program.

This part of the report was developed on the basis of recommendations of a workshop held in Sydney on 30 July 1992.

a) Injuries: All Causes

Need for action

Injuries accounted for 7,935 deaths in Australia in 1990 - 6.6% of all deaths. They are the leading cause of death in males aged under 45 and females aged under 30 years. Injuries contribute more to premature (age <65) years of life lost than cardiovascular disease and cancer combined.[67] Injury incidence is strongly associated with Aboriginality, gender, socioeconomic status, and age.

Deaths from injury have declined by 2% per year (males) and 3% per year (females) since about 1970, to current rates (68/100,000 in males, and 25/100,000 for females).[68] Injuries account for about 9% of hospital admissions, a rate of 19.5/1000 population in 1988.[69] Injury was the fourth most

67 Australian Institute of Health. 1990. *Australia's Health 1990*. Australian Government Publishing Service, Canberra. p 41. In terms of "years of potential life lost" (YPLL), injury accounted for a third of all YPLL to age 65 in 1989 (Federal Office of Road Safety/National Injury Surveillance Unit [NISU], Dec 1991).

68 Australian Institute of Health and Welfare. 1992. *Australia's Health 1992*. Australian Government Publishing Service, Canberra. p 32.

69 Australian Institute of Health and Welfare. 1992. Ibid, Table 2.3.

frequently reported condition causing recent illness in the 1989 ABS National Health Survey, being reported by 7.1% of the population in the preceding two weeks.

Factors associated with the risk of injury

Gender - Males experience higher rates of injury than females, for almost all types of injury. Compared with female rates, male injury mortality was 2.7 times higher, and hospital admissions 1.6 times higher.[70]

Age - All-cause injury mortality rates peak among three age groups - children aged less than 5 years, young adults, and older age. Different injury patterns are typical at these ages, with drowning rates peaking in childhood, motor vehicle injuries maximal in young adulthood, and injury associated with falls rising rapidly with age, especially among those aged 65 years and over.

Alcohol - Alcohol is a factor common to many forms of injury. The US National Committee for Injury Prevention has estimated that half of motor vehicle crashes and homicides may be related to alcohol, and up to a quarter of falls, fires, suicides, and water transport deaths. Of drivers, motorcyclists and pedestrians fatally injured in Australia in 1988 for whom blood alcohol concentration (BAC) data are available, 39% had levels greater than or equal to 0.05g/dL, and another 6% had values between 0 and 0.05g/dL. For work-related fatalities in Australia, BAC of >0.05g/dL (compared with undetectable BAC) was found in a significantly higher proportion of cases where the injured person was driving in the course of work, or was travelling to or from work, than in cases that occurred at (non-vehicular) workplaces.[71]

Socioeconomic status - Most studies have reported higher rates of injury in those in the least advantaged socioeconomic groups.[72] This has been observed for a range of injury categories and groupings, including childhood injuries.

Aboriginality - Best available data suggest that in the period 1984 to 1989 the mortality rate from injuries and poisoning for male Aboriginal Australians was 3.5 times higher than the rate for other males, and the equivalent rate ratio for females was 3.8.[73] For both males and females, motor vehicle trauma and injuries associated with interpersonal violence were prominent. The excess in injury-associated deaths accounts for about 13% of all the excess mortality for Aboriginal Australians.

In the late 1980s, the rate of hospital admissions due to injury and poisoning was 2.4 times higher in Aboriginal males compared to non-Aboriginal males, and the equivalent rate was 3.5 for females.[74] Leading causes of injury resulting in hospital admission were assault, road trauma, and burns and scalds.

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70 derived from data in *Australia's Health 1992*.

71 Hollo CD, Leigh J, Nurminen M. The role of alcohol in work-related fatal accidents in Australia 1982-84. *Occupational Medicine* (in press).

72 Australian Institute of Health and Welfare. 1992. Ibid, p 189.

73 Australian Institute of Health and Welfare. 1992. Ibid, p 379.

74 Australian Institute of Health and Welfare. 1992. Ibid, p 382.

Goal

To reduce the incidence of, and impact on health, of injuries

Targets

Whole Population

Priority population: The whole population	**level**	**year**
To reduce all-cause mortality from injury and poisoning	-20%	2000

Baseline: ABS 1990: 46/100,000

Priority population: The whole population	**level**	**year**
To reduce all-cause hospital admissions for injury and poisoning	-20%	2000

Baseline: Australia's Health 1992: Table 2.3 1950/100,000 (NSW and SA in 1988)

Aboriginals/Torres Strait Islanders

Priority population: All Aboriginal/ Torres Strait Islander	**level**	**year**
males	-50%	2000
females	-50%	2000

To reduce mortality from injury and poisoning among the Aboriginal population towards that of the non-Aboriginal population

Baseline: Australia's Health. 1992. Table A48: Rate ratios 3.5 for males, 3.8 for females

Priority population: All Aboriginal/ Torres Strait Islander	**level**	**year**
males	-50%	2000
females	-50%	2000

To reduce hospital admissions for injury and poisoning among the Aboriginal population towards those of the non-Aboriginal population

Baseline: Australia's Health 1992, Table A52: Rate ratios 2.4 for males, 3.5 for females

Injuries in Males

Priority population: All males	**level**	**year**
To reduce mortality from injury and poisoning towards that of females	-20%	2000

Baseline: Australia's Health. 1992. From Table 2.1: Rate ratio 1990: 2.7

Low socioeconomic (SES) groups

Priority population: Males 25 - 64 years from low socioeconomic groups	**level**	**year**
	-10%	2000

To reduce mortality from injury and poisoning towards that of high socioeconomic status males

Baseline: Australia's Health. 1992. Table A38: Rate ratios 1985-7; 6th to 9th decile 1.95, 10th decile 2.65, compared to highest SES groups

Proposed target

Priority population: Males 25-64 years from low socioeconomic groups

To reduce hospital admissions for injuries and poisonings to that of the highest socioeconomic groups

b) Injuries occurring in specific contexts and settings

Need for action

For preventive purposes, injuries are often considered in terms of circumstances of occurrence, and causal factors (for example, sporting injury and suicide), the pathological nature of trauma (for example, head injury and fractured leg) being a secondary concern. Data on the distribution of injury by place are limited. However, place was recorded for 51% of injury-coded hospital admission in NSW during 1988-89 (National Injury Surveillance Unit, unpublished). Based on these hospital separation data, 34% occurred at home, 21% on a street or highway, 15% in residential institutions, 8% during sport or recreation, 7% in mines, quarries or industry, and 2% on farms.

Based on this information, injury control strategies are being developed within some of these settings, such as the National Road Safety Strategy, the Farmsafe initiative, occupation-based efforts, and in some sporting codes.

The home and sport tend to be settings for high-frequency, low-severity injuries, while road injuries are less numerous but include a high proportion of the most severe injuries.

b.1) Transport-related injuries

Need for action

Road crashes are the dominant cause of all fatal and severe injuries. However, these have declined continuously from a peak of 30 deaths per 100,000 in 1970 to a rate of 13/100,000 in 1991. Decline was relatively slow during the 1980s and has accelerated recently.[75] In 1990, the road crash mortality rate for males was 21/100,000 and 9/100,000 for females (ABS Causes of Death 1990). Rates for both sexes were highest in the 15 to 24 years range, and in those aged over 70 years. In the 15 to 24 years range, road deaths accounted for 49% of injury deaths, and 36% of all deaths.

Road accident deaths occurred most commonly among drivers of motor vehicles, passengers, pedestrians, motor cycle riders and passengers, and bicyclists, in that order.

In recent years several strategies have been used successfully to reduce the road accident fatality rate. These have included significant improvements in vehicle safety, the adoption of stronger enforcement methods with regard to seat belts, drink-driving, and speeding, significant investment in roads infrastructure (including the treatment of accident blackspots), and expanded public education programs. Most countries that have relatively good road safety records are planning to reduce death and serious injury by a further 25-30% by the end of the century.[76] A National Road Safety Strategy has been prepared for Australia, outlining a range of strategies designed to achieve this.

Injury associated with other forms of transport (air, rail, water) is much less common than road injury, but it is not trivial.

Goal	Targets		
To reduce mortality and morbidity from transport-related injury	**Motor Vehicle-related Deaths**		
	Priority population: All males	**level**	**year**
	To reduce motor vehicle-related deaths	-45%	2000
	Baseline: Federal Office of Road Safety, Road fatality statistics Australia 1990: rate in 1989: 23.6/100,000		

75 data derived from Federal Office of Road Safety 1990, and ABS population estimates

76 *National Road Safety Strategy*. 1991. Draft prepared in conjunction with the National Workshop held in Adelaide, October 1-2, 1991.

Priority population: All females	level	year
To reduce motor vehicle-related deaths	-28%	2000

Baseline: Federal Office of Road Safety, Road fatality statistics Australia 1990: rate in 1989: 9.7/100,000

Priority population: Children 0 - 16 years	level	year
To reduce motor vehicle-related deaths	-28%	2000

Baseline: Federal Office of Road Safety, Road fatality statistics Australia 1990: rate in 1989: 6.9/100,000

Priority population: All people 60 years or more	level	year
To reduce motor vehicle-related deaths	-18%	2000

Baseline: Federal Office of Road Safety, Road fatality statistics Australia 1990: rate in 1989: 18.4/100,000

Priority population: Males 17 - 24 years	level	year
To reduce motor vehicle-related deaths	-27%	2000

Baseline: Federal Office of Road Safety, Road fatality statistics Australia 1990: rate in 1989: 54.7/100,000

Motor Vehicle-related Serious Injuries

Priority population: All males	level	year
To reduce motor vehicle-related serious injuries	-39%	2000

Baseline: ABS Road Traffic Accidents involving casualties 1989: 213/100,000

Priority population: All females	level	year
To reduce motor vehicle-related serious injuries	-21%	2000

Baseline: ABS Road Traffic Accidents involving casualties 1989: 126/100,000

Priority population: Children 0 - 16 years	level	year
To reduce motor vehicle-related serious injuries	-18%	2000

Baseline: ABS Road Traffic Accidents involving casualties 1989: 85/100,000

Priority population: People 60 years or more	level	year
To reduce motor vehicle-related serious injuries	-24%	2000

Baseline: ABS Road Traffic Accidents involving casualties 1989: 112/100,000

Priority population: Males 17 - 24 years	level	year
To reduce motor vehicle-related serious injuries	-50%	2000

Baseline: ABS Road Traffic Accidents involving casualties 1989: 524/100,000

Priority population: All cyclists	level	year
To reduce the rate of hospital admission due to injury and road crashes	-32%	2000

Baseline: NSW 1989, FORS/NISU: 31/100,000

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Organic mental disorder	Alcohol misuse	Safety behaviours, Health literacy, Safety skills and first aid	Transport

b.2) Suicide and self-inflicted injury

Need for action

The pattern of age-specific suicide has changed over the past 20 years. For adolescents and young adults, rates have increased in males, and failed to decline in females. For older age groups, the rate of suicide has declined over this period. In all, suicide accounted for 2.7% of male deaths and 0.9% of female deaths in 1990.[77]

In 1990 in males aged 15-24 years, suicide was the second most common cause of death (after motor vehicle crashes), while among males aged 25 to 44 years, suicide was the most common cause of death.

For females, suicide was the second most common cause of death for those aged 15 to 24 years, and the third most common cause for females aged 25 to 44 years.[78]

From 1964 to 1988 the suicide rate among 15 to 19 year old males in rural cities in NSW more than doubled, while in rural municipalities and shires the rate increased more than fivefold.[79]

Evidence from overseas indicates that the increasing suicide rate among working-age males may be linked with higher unemployment and its impact on their social roles.[80] Among women, there is a possible relationship between reduction in suicide rates and an increase in the autonomy of women. Improvements in medical services and technology have also reduced the fatality of non-violent forms of attempted suicide favoured by females.[81]

While the incidence of suicide was probably once very low among Aboriginal communities living in traditional ways, since the 1970s this, and other self-inflicted injuries, have become more frequent in many Aboriginal communities. The incidence of suicide appears to have increased markedly in the 1980s, 'accompany[ing] a decline in the traditional values, an unfortunate side effect of ... modernisation'. But it appears, too, that the rise in suicide may reflect a differential worsening of the social environment for some Aboriginal communities.[82]

This evidence is supported by the Royal Commission into Aboriginal Deaths in Custody[83] which found high rates of unemployment (84%), low levels of formal education, histories of childhood separation from families, police records from an early age, and alcohol abuse characterised the lives of the 99 Aboriginal men who died in custody.

There is some evidence that elimination of methods of suicide can have a substantial effect on overall suicide rates, for example, changes in legislation re prescribing of hypnotic/sedative drugs in the late 1960s in Australia. Although the majority of people who commit suicide have suffered depressive illness and contacted their general practitioner in the month beforehand, it is difficult for the primary care provider to identify those people most in need of help. However, early diagnosis of suicidal depression and the provision of crisis counselling makes good sense in this setting.

While suicide is an important focus in injury control, morbidity associated with survivors of self-inflicted injury is substantial.[84] There

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77 Australian Bureau of Statistics. 1990. *Causes of Death Australia, 1990.* Australian Bureau of Statistics, Canberra.

78 Australian Bureau of Statistics. 1990. Ibid.

79 Dudley M, Waters B, Kelk N & Howard J. 1992. Youth Suicide in New South Wales: Urban-Rural Trends. *Medical Journal of Australia.* 156: 83-88

80 Australian Institute of Health. 1990. *Australia's Health 1990.* Australian Government Publishing Service, Canberra. p 47.

81 Australian Institute of Health. 1990. Ibid, p 48.

82 Thomson N. 1991. A Review of Aboriginal Health Status. In: Reid J & Trompf P, Eds. *The Health of Aboriginal Australia.* Harcourt Brace Jovanovich Publishers, Sydney. p 68.

83 Royal Commission into Aboriginal Deaths in Custody. 1991. *National Report. Overview and Recommendations.* Australian Government Publishing Service, Canberra. p 3.

84 Kreitman N, Casey P. 1988. Repetition of parasuicide: an epidemiological and clinical study. *British J Psychiatry.* 153: 792-800.

is also a strong association between self-injurious behaviour and completed suicide,[85] suggesting self-injurious attempts as a framework for health targets in this area.

Goal

To reduce the incidence of self-injurious suicide attempts

Targets

Priority population: Young people 14 - 19	level	year
years	-15%	2000
males	-15%	2000
females		

To reduce the incidence of self-injurious suicide attempts
Baseline: personal communication, Zubrick S, August 1992: Western Australia 1987; males 220/100,000, females 411/100,000

Priority population: All males	level	year
To reduce deaths from suicide	-10%	2000

Baseline: Australia's Health. 1992. p 34: 20/100,000

Priority population: All females	level	year
To reduce deaths from suicide	-10%	2000

Baseline: Australia's Health. 1992. p 34: 5/100,000

Proposed targets

Priority population: Young adults 20-25 years
To reduce the incidence of self-injurious suicide attempts

Priority population: All Aboriginals/Torres Strait Islanders
To reduce deaths from suicide

Priority population: Young people 15 - 19 years living in rural communities
To reduce suicide to that of young people living in urban areas
Reference: Dudley M. et al. 1992. Youth suicide in New South Wales: urban-rural trends. Medical Journal of Australia. 156:83-88

Priority population: Older, widowed males
To reduce deaths from suicide

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Mental health problems and disorders	Alcohol misuse, Quality use of medicines, Mental health	Health literacy, Life skills and coping, Social support	Work and the workplace (access to paid employment)

85 Silburn S, Zubrick SR, Hayward I. 1992. Completed suicide in Western Australian Youth: a study of 96 cases aged 15-24 years. In: McKillop S (Ed). *Preventing youth suicide*. Aust Inst of Criminology, Canberra.

b.3) Interpersonal Violence

Need for action

Assessment of the level of violence in the community is notoriously difficult. Apart from police and court records, there is no formal mechanism for determining accurately the incidence of child abuse, sexual assault, domestic violence, or other violent assaults, including those that are racist or relate to sexual orientation. However, using the limited available data, the National Committee on Violence concluded that over the period 1973-74 to 1987-88 there has been an increase in violent crime rates in Australia.[86]

The vast majority of those who commit acts of violence are males.[87] Injury surveillance studies report that men comprise 80% of assault victims treated in public hospitals, although there is under-reporting by female assault victims.[88] With the important exceptions of sexual assault and domestic violence, men are more likely than women to become the victims of violence.

The victims of violence and violent offenders in general appear to be drawn disproportionately from disadvantaged backgrounds, particularly those who are unemployed. The Aboriginal population is at greater risk of violence. Children aged less than one year are at relatively high risk of death from violence, but most of the victims of non-fatal violence are young adults.[89] Alcohol is closely associated with violence in Australia.

The victims of sexual assault and domestic violence are almost always women. The data on trends in the incidence of domestic violence are unclear as a result of changes in legislation and probable under-reporting. However, a Victorian study found that domestic violence constituted 23% of serious assaults on civilians in Victoria 1987-89, second only to pub/club violence (27%). Broad estimates suggest that violent behaviour is widespread, almost to the point of being a normal, expected behaviour in many homes.[90] On the basis of the results of a survey of victims of crime conducted by the ABS in 1990 the ABS estimated that about 11,300 women (36% of all those assaulted) had been assaulted at least once inside their own homes (compared with 10% or 6,180 of the male assault victims).[91] While there may be less reporting by victims of higher socioeconomic status, the evidence suggests that the actual incidence of domestic violence may also be lower for those of higher socioeconomic status.[92]

Increasing public concern at the widespread problem of domestic violence has led to the initiation of a number of strategies to prevent its occurrence, including policies of active prosecution, changing police procedures, providing services for victims, and public education campaigns to change community tolerance of, and male attitudes toward, this type of crime.[93]

The incidence of sexual assault is known to be significantly under-reported. A recent survey of first year tertiary social science students found that 28% of girls and 9% of boys had experienced sexual abuse as children.[94] It has been estimated that 9% of children born in 1987 in NSW will have been abused before they reach 16 years of age.[95]

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86 National Committee on Violence. 1991. *Violence: directions for Australia.* Australian Institute of Criminology, Canberra. p 23.

87 National Committee on Violence. 1991. Ibid, p 33.

88 National Committee on Violence. 1991. Ibid, p 33.

89 National Committee on Violence. 1991. Ibid, p 37.

90 National Committee on Violence. 1991. Ibid, p 33.

91 Matka E. 1991. *Domestic Violence in NSW.* NSW Bureau of Crime Statistics and Research. Crime and Justice Bulletin No 12.

92 Matka E. 1991. Ibid, p 3.

93 Matka E. 1991. Ibid, p 5.

94 Health Care Committee Expert Advisory Panel on Women and Mental Health. National Health and Medical Research Council. 1991. *Women and Mental Health.* Australian Government Publishing Service, Canberra. p 31.

95 Young L, Brooks R. 1989. *The Profile of Child Abuse and Neglect in NSW.* Department of Family and Community Services, NSW.

There have been few structured programs to reduce rates of violence. However, the National Committee on Violence has recommended a series of strategies for the prevention and control of violence. The National Committee on Violence Against Women released a National Strategy on Violence Against Women in October 1992.[96]

Goal

To reduce mortality and morbidity from injury caused by interpersonal violence

Targets

Priority populations:	**level**	**year**
Males 20 - 39 years	-33%	2000
Females 20 - 29 years		

To reduce deaths from homicide

Baseline: Strang H. 1992. Australian Institute of Criminology, Canberra: males 20-39, females 20-29: rate 3/1000, compared to whole population rate of 2/100,000

Priority population: Children 0-9 years	**level**	**year**
To reduce deaths resulting from child abuse	-33%	2000

Baseline: Strang H. 1992. Australian Institute of Criminology, Canberra: 1.3/100,000

Proposed targets

Priority population: Aboriginal/Torres Strait Islander males and females
To reduce deaths from intentionally inflicted injuries

Priority population: Women 18 years or more
To reduce deaths from homicide

Baseline: Bonney R. 1987. Homicide 2. Bureau of Crime Statistics and Research, Sydney: Between 1968 and 1986 23% of all homicides involved spouses or de facto partners

Priority population: Children and young people 0 - 16 years
To reduce morbidity resulting from intentionally inflicted injuries

Priority populations:
Men 17 years or more from low socioeconomic groups
Women 17 years or more from low socioeconomic groups
Aboriginal/Torres Strait Islander males and females 17 years or more
To reduce morbidity resulting from intentionally inflicted injuries

Priority population: Women 17 years or more
To reduce morbidity resulting from domestic violence

Priority population: Children and young people 0 - 16 years
To reduce morbidity resulting from sexual assault

Priority population: Women 17 years or more
To reduce morbidity resulting from sexual assault

96 National Committee on Violence Against Women. 1992. *National Strategy on Violence Against Women*. Office of the Status of Women, Department of Prime Minister and Cabinet, Canberra

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Alcohol misuse	Health literacy, Life skills and coping, Social support	Housing, home and community infrastructure, Schools

b.4) Residential Injuries

Need for action

Available data indicate that in about one-third of cases, injury leading to hospital admission occurs at home. Many other injuries are sustained in residential institutions. With the exception of deliberate injury, injuries occurring at home tend to be less serious than in other settings. Some important types of injury in residential settings follow.

Falls - Falls accounted for almost one in four injury admissions to hospital in 1986, and are the leading cause of injury in people aged 65+ (*Australia's Health*, 1990, pp. 41-42). Falls are often related to iatrogenic injury, typically psychotropic drug use in the elderly. Floors and other surfaces are common causes of falls.

Drownings - Drowning accounted for 41% of injury deaths at ages 1 to 4 years in the period 1988-90, with a rate of 8 in 100,000 (NISU/ABS mortality data). About half the cases occurred in a domestic swimming pool.[97] [98] This is one of the few causes of injury that is more frequent among high socioeconomic groups.

Poisoning - Hospital admissions due to accidental poisoning (excluding adverse effects of medications) are substantially higher at ages 1-4 years than at other ages. This is true for both poisoning by drugs and medications, and by other substances (Monash University. Accident Research Centre, unpublished tables). Child resistant packaging has been an effective form of intervention for this type of injury.

Burns and scalds - Rates of death due to fire, fumes etc. are low at young and middle ages, then rise with age, more sharply for older ages. A small elevation in rates is seen at infancy (NISU/ABS mortality data). In NSW in 1986, the all-ages hospital admission rates due to burns was 42/100,000 population (ABS 4306.1). In Melbourne in 1989, the hospital admission rate for burns and scalds in children was 48/100,000 (113/100,000 at ages 0-5 years).[99]

Dog attacks - Victorian hospital admission data for dog attacks show a peak in early childhood, declining to a low level for ages 15 to 64 years, thereafter rising gradually (Monash University Accident Research Centre, unpublished tables). In Melbourne in 1989 dog attacks led to a hospital admission rate for children under 15 years of 20/100,000 (34/100,000 in the 0-4 years age group), and to a hospital attendance rate of 110/100,000 (127/100,000 in the 0-4 years age group).[100]

A wide range of other injuries occur in the domestic setting - electrical injuries, assaults and self-inflicted injuries, as well as injuries associated with machinery and other household equipment and toys.

Goal

To reduce mortality and morbidity from injuries occurring in residential settings

Targets

Falls among older people

Priority population: People 65 years or more	**level**	**year**
To reduce mortality from falls	-10%	2000

Baseline: NISU/Routine mortality data: 45/100,000

Priority population: People 75 - 84 years	**level**	**year**
To reduce the proportion admitted to	-10% (m)	2000
hospital as a result of fractured hips	-20% (f)	2000

Baseline: Lord S & Sinnett P. 1986. Femoral neck fractures: admissions, bed use, outcomes and projections. Medical Journal of Australia. 145(10): 493-496: 1981 - Males 4/1000; Females 12/1000

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97 Ozanne-Smith J. 1991. *Child accident and injury prevention research in other than road accidents. Part 1: Overview of child injuries in Victoria.* Monograph. Accident Research Centre, Monash University, Melbourne.

98 Nixon J, Pearn JH, Wilkey I & Corcoran A. 1986. Fifteen years of child drowning: a 1967-81 analysis of all fatal cases from the Brisbane drowning study and an eleven-year study of consecutive near-drowning cases. *Accident Analysis and Prevention*. 18(3): 199-203.

99 Nolan T & Penny M. 1992. Epidemiology of non-intentional injuries in an Australian urban region: results from injury surveillance. J *Paediatr Child Health*. 28: 27-35.

100 Nolan T & Penny M. 1992. Ibid.

Priority population: People 85 years or more	level	year
To reduce the proportion admitted to hospital as a result of fractured hips	-10%(m) -20%(f)	2000 2000

Baseline: Lord S & Sinnett P. 1986. Femoral neck fractures: admissions, bed use, outcomes and projections. Medical Journal of Australia. 145(10): 493-496: 1981 - Males 16/1000; Females 29/1000

Drowning

Priority population: Children 0 - 4 years	level	year
To reduce deaths from drowning	-50%	2000

Baseline: NISU/ABS Mortality data, mean rate 1988-90: 7.1/100,000

Priority population: Children 0 - 4 years	level	year
To reduce the rate of near-drowning	-30%	2000

Baseline: Nolan T & Penny M. 1992. Epidemiology of non-intentional injuries in an Australian urban region: results from injury surveillance. J Paediatr Child Health. 28: 27-35: 12/100,000

Poisonings

Priority population: Children 0 - 4 years	level	year
To reduce hospital admissions for poisoning	-20%	2000

Baseline: Nolan T & Penny M. 1992. Epidemiology of non-intentional injuries in an Australian urban region: results from injury surveillance. J Paediatr Child Health. 28: 27-35: 208/100,000

Burns and scalds

Priority population: Persons 55 years or more	level	year
To reduce mortality from burns[101]	-20%	2000

Baseline: NISU, ABS mortality data 1990: 1.8/100,000

Priority population: Children 0 - 4 years	level	year
To reduce hospital admissions for burns/scalds	-20%	2000

Baseline: Nolan T & Penny M. 1992. Epidemiology of non-intentional injuries in an Australian urban region: results from injury surveillance. J Paediatr Child Health. 28: 27-35: 113/100,000

Dog attacks

Priority population: Children less than 10 years	level	year
To reduce hospital admissions due to dog attacks	-30%	2000

Baseline: Melbourne University Accident Research Unit (MUARC), unpublished data: rates <1 year: 1.3/100,000, ages 1-4 years 36.9/100,000

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Osteoporosis	Safety behaviours	Health literacy, Safety skills and first aid	Housing, home and community infrastructure

101 Note that routine mortality data do not distinguish deaths due to burns and scalds. Baseline data are deaths due to fire etc (E890-899) and to hot substances (E924).

b.5) Industry - related injuries

Need for action

Among adults of working age, occupation-related injury is recognised is a serious problem. Australia's industrial accident record does not stand up well by international comparison. Among workers in the manufacturing and construction industries, rates of injury and illness are much higher than those among the finance and property industries, or the rates among professional and technical workers. The highest concentrations of male and female NESB workers tend to be in manufacturing (males and females) and construction (males). The limited figures available suggest that immigrant workers may be sustaining more severe injuries and/or more frequent injuries than Australian-born workers.[102]

Worksafe Australia proposes to set targets for priority occupational health and safety issues, including occupational injury. (see Work and the Workplace).

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Safety behaviours	Safety skills and first aid	Physical environment, Work and the workplace

102 Lin V & Pearse W. 1990. A Workforce at Risk. In: Reid J & Trompf P, Eds. *The Health of Immigrant Australia*. Harcourt Brace Jovanovich, Publishers, Sydney. p 206 - 249.

b.6) Product safety

Need for action

There is little population-based information about injuries related to consumer products in Australia. Product failure was estimated to account for 23,000 injuries in 1989, according to a survey published by the Australian Consumers' Association.[103] An unknown number of additional injuries may have resulted from unsafe design or incorrect use of products.

Development of specific targets concerning product safety should be undertaken in collaboration with the agencies responsible for consumer safety.

Goal

To increase the proportion of consumer products manufactured and/or sold in Australia which are safe

Proposed targets

Priority population: Infants less than 1 year
To reduce injuries related to nursery furniture

Priority population: Consumers of specific products
To decrease morbidity from injuries caused by dangerous consumer products

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
		Health literacy	Housing, home and community infrastructure

103 Australian Consumers' Association. 1989. *An arm and a leg: the human and economic cost of unsafe products.* Australian Consumers' Association, Sydney.

b.7) Sport and recreation-related injuries

Need for action

There are no regular, standardised data on sport-related injuries in Australia. It has, however, been estimated that there are more than 1 million sports injuries in Australia annually, of which 40,000 require hospital admission including surgical intervention for some. Team and contact sports have the highest rates of injury. Serious injury rates in children are low, but after the age of 12 the rate doubles and then increases 7 fold after 16 years. Injuries to boys are twice as frequent as injuries to girls - largely the result of increased participation by boys in more contact sports. Prevention of up to half of the sport-related injuries appears feasible.[104]

Information about recreation-related injury is even more limited, although it is recognised that playground injuries are common in children aged 5-9 years.

Development of additional targets concerning sports injury should be undertaken in collaboration with the organisations in this sector.

Goal

To enhance the safety of sport and recreation

Targets

Priority population: People involved in active sport and recreation

	level	year
To decrease hospital admissions[105] resulting from sports injuries	-15%	2000

Baseline: Monash University Accident Research Centre, Unpublished data: 54/100,000 per year

Proposed targets

Priority population: Squash, badminton and cricket players
To reduce hospital admissions for severe eye injury resulting from sports injuries

Priority population: Playground users 5-9 years
To reduce hospital admissions for fractures due to falls from playground equipment
Baseline: Monash University Accident Research Centre, Unpublished data[106]: 149/100,000 per year

Priority population: All sports participants
To reduce the rate of dental injuries related to sport which presented at Accident and Emergency Departments

Priority population: All horse riders
To reduce the rate of hospital admissions with head injuries resulting from horse riding

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Sight disorders	Physical activity, Safety behaviours	Health literacy, Safety skills and first aid	Schools

104 Centre for Health Promotion and Research. 1990. *Sports Injuries in Australia: Causes, Costs and Prevention.* Report to the National Better Health Program, October 1990.

105 Note that only two types of sports injuries are identified in standard hospital separation data: falls from tackles (E8860) and collisions (E9170). Other types of sports injuries cannot be identified at present.

106 The total admission rate for playground injuries in Victoria was estimated to be 188/100,000 population aged 5-9 years (Ozanne-Smith, MUARC, unpublished); only data for fractures are reported in the proposed target.

b.8) Injury in non-urban settings

Need for action

Rural populations are over-represented in many general causes of injury, as well as those specific to the work carried out on farms and farm environments. The leading causes of occupational mortality in Australia are mining and transport (which are largely rural based), followed by farming-related deaths. Strategies to address rural injuries have included the development of a National Farmsafe program to coordinate injury prevention in this setting.

Goal	Target		
To reduce the differences in morbidity and work-related mortality rates between rural and urban populations	**Priority population: Rural residents**	**level**	**year**
	To reduce work-related deaths on farms	-20%	2000
	Baseline: Harrison J et al. 1989. Deaths as a result of work-related injury in Australia 1982/84. Medical Journal of Australia. 150: 118-125: 22/100,000		

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Sight disorders	Alcohol misuse, Safety behaviours	Health literacy, Safety skills and first aid	Schools, Work and the workplace

2.1.4 Communicable Diseases

Need for action

In an era where attention is focused on chronic and degenerative disorders, the persistent importance of influenza, measles, whooping cough, and meningitis is easily overlooked. There are continuing episodes of meningitis, tuberculosis, pertussis, hepatitis, food and waterborne disease, influenza, and other communicable diseases. Control of vaccine-preventable diseases of childhood, while markedly improved, is still incomplete.

Good control of communicable disease should rest on sound population data. Surveillance and the information generated by surveillance programs are the cornerstone of effective communicable disease control. Recently State and Territory governments have upgraded surveillance procedures and the ability to act quickly on the results of surveillance. It is imperative to be able to recognise episodes of, for example, legionellosis, vaccine-preventable disease, tuberculosis, and food-borne communicable disease in order to intervene.

Timely, sensitive, and effective surveillance should be developed further and maintained for communicable diseases, especially for vaccine-preventable diseases of childhood, meningitis, hepatitis, enteric disease, and tuberculosis. Several systems exist but require further development.

Preliminary data from regional research projects have demonstrated high rates of infectious and parasitic diseases and low rates of immunisation in Aboriginal and Torres Strait Islander children. The provision of clean water and adequate waste disposal, together with the provision of accessible immunisation services, would do much to reduce the impact of infectious disease among these populations. There is need for improved management of infectious and parasitic disorders in the Aboriginal and Torres Strait Islander populations, including improved access to health facilities together with primary preventive measures.

Effective communicable disease prevention and control require full child immunisation coverage, adult immunisation as appropriate (See 2.2.15 - Immunisation), the ability to respond to disease episodes, and the continuation of other effective methods of reducing the spread of sexually transmitted diseases, including HIV/AIDS.

Goal

To reduce mortality and morbidity from communicable diseases among children and adults

Targets

Priority population: Aboriginal/ Torres Strait Islander males	**level**	**year**
To reduce mortality from infectious and parasitic diseases	-50%	2000

Baseline: Thomson N. 1991. Recent trends in Aboriginal mortality. Medical Journal of Australia. 154: 235-239. 1985: 0.6/1000

Priority population: Aboriginal/ Torres Strait Islander females	**level**	**year**
To reduce mortality from infectious and parasitic diseases	-50%	2000

Baseline: Thomson N. 1991. Recent trends in Aboriginal mortality. Medical Journal of Australia. 154: 235-239. 1985: 0.4/1000

Tuberculosis

Priority population: The whole population	**level**	**year**
To reduce the incidence of tuberculosis	-80%	2000

Baseline: Cheah D, for the Communicable Disease Network of Australia. TB Notification Rate for Australia, 1991. Communicable Disease Intelligence. 16: 398-400: 5.37 per 100,000 per year

Nosocomial Infection

Priority population: Hospital inpatients	level	year
To reduce the proportion who develop hospital-acquired infections	5.7%	2000

Baseline: McLaws ML, Gold J, King K, Irwig L & Berry G. 1988. The prevalence of nosocomial and community-acquired infection in Australian Hospitals. Medical Journal of Australia. 149:582-590: 6.3%

Proposed targets

Vaccine-preventable Diseases

Priority population: Children 0-6 years
To reduce the incidence of measles
Baseline: Ponnathuri A & Hall R. 1991. Annual Report. National Notifiable Disease Surveillance. Communicable Disease Intelligence. 16: 334-336: 8 per 100,000 per year

Priority population: Children 0-6 years
To reduce the incidence of Congenital Rubella Syndrome (CRS)

Priority population: Children 0 - 6 years
To reduce the incidence of mumps

Priority populations:
All children 0 - 2 years
Aboriginal/Torres Strait Islander children 0 - 5 years
NESB children 0 - 5 years
Children 0 - 2 years from low socioeconomic groups
To reduce the incidence of Hib meningitis

Priority population: New-born infants in those groups recommended to receive immunisation against hepatitis B
To reduce the incidence of hepatitis B

Priority populations:
Health workers
All Aboriginals/Torres Strait Islanders
To reduce the incidence of hepatitis B

Priority populations:
Adults 65 years or more
People with chronic disease especially cardio-respiratory disorders
Residents of nursing homes
To reduce the incidence of influenza

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Sexually transmitted diseases	Healthy sexuality, Immunisation	Health literacy, Social support	Physical environment, Housing, home and community infrastructure

2.1.5 HIV/AIDS

While Australia's response to the HIV virus has been widely praised as humane, sound, and effective in slowing its spread, about 15,000 Australians are estimated to be HIV positive, of whom more than 3,400 had developed AIDS by June 1992. The AIDS epidemic has had different characteristics in different subgroups. Infection via intravenous drug use is continuing, albeit at a rate that is low by international standards, while the time between successive doublings of the number of AIDS cases among homosexual and bisexual men has lengthened considerably, indicating that in those populations, the epidemic is slowing.

The success of the strategies developed to slow the spread of HIV/AIDS has demonstrated the feasibility of reducing the spread of other sexually transmitted diseases. Safer sex practices and needle/syringe exchange programs have had an impact.

National indicators for selected priority areas have been developed to contribute to the development of national standards for the ongoing evaluation of HIV/AIDS activities. On 28 September 1992 the Intergovernmental Committee on AIDS endorsed the national HIV/AIDS indicators, targets, and reporting arrangements.[107] The national indicator set includes two national HIV/AIDS targets:

- to reduce the incidence of HIV to an annual rate of less than 2 per 100,000 Australian population by the year 2000; and
- to achieve compliance by the Commonwealth and all States and Territories with the reporting requirements specified for the national HIV/AIDS indicators.[108]

Goal

To reduce the incidence and impact of HIV/AIDS

Target

Priority population: Sexually active people and injecting drug users

	level	year
To reduce the incidence of HIV	-40%	2000

Baseline: Estimate: 600 new HIV infections per annum, or an annual rate of about 3.5/100,000 (Provided by the National HIV/AIDS Strategy)

Proposed targets

Priority population: Men who have sex with men (particularly those aged under 25 years)
To reduce the incidence of HIV
Baseline: National Centre in HIV Epidemiology and Clinical Research. 1992. Australian Surveillance Report. 8(1): 91/100,000

Priority population: Injecting drug users
To reduce the incidence of HIV through needle sharing
Baseline: National Centre in HIV Epidemiology and Clinical Research, Australian HIV Surveillance Report, Vol 7, Suppl 4, Oct 1991: 28 new cases nationally in period 1 April 1991 - 30 September 1991

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Sexually transmitted diseases	Illicit drug use, Healthy sexuality	Health literacy	Schools, Work and the workplace

107 National HIV/AIDS Strategy. 1992. *National HIV/AIDS Indicators*. AIDS/Communicable Diseases Branch, Department of Health, Housing and Community Services, Canberra. p 1.

108 National HIV/AIDS Strategy. 1992. Ibid, p 2.

6 Sexually Transmitted Diseases

Need for action

The sexually transmitted diseases (STDs) of greatest concern in Australia because of infection rates, or seriousness of the disease, are chlamydial infection, gonorrhoea, pelvic inflammatory disease, genital herpes, hepatitis B, syphilis, and HIV infection. HIV has been addressed separately.

Data from clinics suggest a decline in homosexually-acquired gonorrhoea over the years 1979-89,[109] and in heterosexually-acquired gonorrhoea.[110] Notifications of gonorrhoea in Australia have declined from about 7/10,000 in 1983 to less than 3/10,000 in 1989.

Although STDs, other than HIV, rarely lead to death, many have serious consequences. They can be markers or cofactors for the transmission of HIV. Chlamydia and pelvic inflammatory disease can lead to tubal damage resulting in ectopic pregnancies and infertility. The human papilloma virus is thought to be associated with cervical cancer, although the evidence remains equivocal. Hepatitis B, which is sometimes, though not exclusively, sexually transmitted, can lead to cirrhosis and liver cancer.

Goal

To reduce the incidence of the sexually transmitted diseases chlamydia, gonorrhoea, and syphilis

Proposed targets

Priority population: Sexually-active adults and young people
To reduce the incidence and sequelae of hepatitis B

Priority population: Sexually-active adults and young people
To reduce the incidence of STDs (including syphilis, gonorrhoea, chlamydia, and pelvic inflammatory disease)

Priority population: Sexually-active Aboriginal/Torres Strait Islander adults and young people
To reduce the incidence of sexually transmitted diseases

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Communicable diseases, HIV/AIDS, Perinatal and infant mortality	Illicit drug use, Healthy sexuality, Reproductive health, Infertility	Health literacy	

109 Donovan B. 1991. Gonorrhoea and Asian prostitution: the Sydney Sexual Health Centre experience. *Medical Journal of Australia* 154: 520-1.

110 Donovan B. 1991. Heterosexual gonorrhoea in central Sydney: implications for HIV control. *Medical Journal of Australia*. 154: 175-9.

2.1.7 Maternal and Infant (Including Perinatal) Mortality/Morbidity

a) Perinatal and Infant Mortality/Morbidity

Need for action

While the overall infant and perinatal mortality rates among the Australian population are low by international standards, rates among the Aboriginal/Torres Strait Islander population are two to four times higher than those of the non-Aboriginal population. Since the 1970s there has been a steady decline in Aboriginal infant mortality, although less impressive in the 1980s. Aboriginal perinatal mortality rates have declined substantially since the early 1970s, but only at the same rate as that of the general population. In contrast to total mortality, the Aboriginal infant mortality rate is highest in the more remote areas of Australia.[111]

Preterm birth/low birth weight infants (LBW) are at greatest risk. For example, among babies born in 1989 in Western Australia (WA) the infant mortality rate was 70.3 per 1000 live births for infants weighing less than 2500 g at birth compared with 1.8 per 1000 for those weighing 3500-3999 g. The infant mortality rate among the LBW infants of Aboriginal women was 105.6 per 1000 and 65.5 per 1000 for those born to Caucasian women.[112] During the 1980s about 12% of births to Aboriginal women and 6% of births to non-Aboriginal women were LBW. Many of these LBW babies would also have been preterm infants, preterm births comprising 6-7% of all babies born in WA.[113] In WA postneonatal mortality for Aboriginal infants is increasing and is twice as high as neonatal mortality.[114]

There is now considerable evidence that sexually transmitted diseases in pregnancy, particularly genital and urinary tract infections, are related to the occurrence of preterm birth.[115 116]

The Sudden Infant Death Syndrome (SIDS) rate for Australia for the period 1975 to 1988 was 2.0 per 1,000 live births (ABS figures). In Victoria the SIDS rate has decreased every year since 1985 (with the exception of 1989).[117] Tasmanian research has confirmed an increased rate of SIDS in infants sleeping prone, and in Tasmania there is documented evidence of a substantial decline in the proportion of infants sleeping prone at one month of age (following advice to parents), and a fall in the SIDS rate to 1.6 per 1,000 live births. These are preliminary figures and formal evaluation of the effect of prone position avoidance on SIDS is under way. Nevertheless, the evidence, in conjunction with evidence of SIDS rate declines in New Zealand, Holland, and other countries, indicates that avoidance of the prone sleeping position reduces SIDS, while other factors such as reducing babies' exposure to

111 Thomson, N. 1991. A Review of Aboriginal Health Status. In: Reid J & Trompf P Eds. 1990. *The Health of Aboriginal Australia.* Harcourt Brace Jovanovich Publishers, Sydney. p 49.

112 Gee V. 1991. *The 1989 Western Australian Birth Cohort.* Health Department of Western Australia, Perth.

113 Gee V. 1991. *Perinatal statistics in Western Australia.* Eighth Annual Report of the Western Australian Midwives' Notification System 1990. Health Department of Western Australia.

114 Gee V. 1991. *The 1989 Western Australian Birth Cohort.* Health Department of Western Australia, Perth.

115 Schultz R, Read AS, Straton JAY, Stanley FJ, Morich, P. 1991. Genitourinary tract infections in pregnancy and low birth weight: case-control study in Australian Aboriginal women. *British Medical Journal.* 303(6814): 1369-73.

116 McDonald HM, O'Loughlin JA, Jolley P, Vigneswaran R, McDonald PJ. 1992. Prenatal microbiological risk factors associated with preterm birth. *British Journal of Obstetrics and Gynaecology.* 99: 190-6.

117 *Personal communication 1992.* Sudden Infant Death Research Foundation, Victoria.

tobacco smoke, encouraging breastfeeding, and ensuring babies do not overheat may also influence the SIDS rate.[118]

In Western Australia the SIDS rate for Aboriginal infants is 3 to 4 times higher than for non-Aboriginal infants and is increasing.[119]

Other strategies that assist in reducing infant mortality include ensuring the optimal health of women during pregnancy, antenatal care, postnatal support for parents, ready access to infant and child health services, and home and community environments that limit the spread of communicable diseases.

Goal

To reduce disability and death in pregnancy and early childhood

Targets

Priority population: Aboriginal/ Torres Strait Islander infants	**level**	**year**
To reduce the infant mortality rate	-50%	2000

Baseline: Thomson N & Briscoe N. 1991. Overview of Aboriginal health status in Queensland. AGPS, Canberra. Aboriginal infant mortality rates per 1,000 live births 1986-88: Queensland 20.7; Western Australia 24.1; South Australia 20.4; Northern Territory 32.2. Total Australian infant mortality rate 1986-88: 8.7 per 1,000 live births

Priority population: Aboriginal/ Torres Strait Islander infants	**level**	**year**
To reduce perinatal mortality rates	-50%	2000

Baseline: Thomson N & Briscoe N. 1991. Overview of Aboriginal health status in Queensland. AGPS, Canberra. Aboriginal perinatal mortality rates per 1,000 live births 1986-88 : Queensland 32.1; Western Australia 19.1; South Australia 33.1; Northern Territory 46.1. Total Australian perinatal mortality rate 1986-88: 10.9 per 1,000 live births

Priority population: Aboriginal/ Torres Strait Islander infants	**level**	**year**
To reduce the proportion whose birthweight is less than 2,500 grams	5%	2000

Baseline: Thomson N & Briscoe N. 1991. Overview of Aboriginal health status in Northern Territory. 1988: 15.9% of babies born to Aboriginal women compared with 6.0% of babies born to non-Aboriginal women; Thomson N & Briscoe N. Overview of Aboriginal health status in New South Wales. AGPS, Canberra. 1987: 10.6% of babies born to Aboriginal women compared with 5.9% of babies born to non-Aboriginal women; Thomson N & Briscoe N. 1991. Overview of Aboriginal health status in Queensland. AGPS, Canberra. 1987: 9.6% of babies born to Aboriginal women compared with 4.5% of babies born to non-Aboriginal women

Priority population: Infants aged up to 12 months	**level**	**year**
To reduce the rate of Sudden Infant Death	-40%	2000

Baseline: ABS 1975 to 1988. 2 per 1,000 live births

Priority population: All infants	**level**	**year**
To reduce the incidence of preterm births/low birthweight	6%	2000

Baseline: Chan A. 1989. Pregnancy outcome in South Australia 1989, Epidemiology Branch, SA Health Commission. p 51. 7.1% of all live births

118 *Personal communication. 1992.* Professor T. Dwyer, Director, Menzies Centre for Population Health Research, University of Tasmania.

119 Gee V. 1991. *The 1989 Western Australian Birth Cohort.* Health Department of Western Australia, Perth.

Proposed targets

Priority population: Aboriginal/Torres Strait Islander infants
To reduce postneonatal mortality

Priority population: Aboriginal/Torres Strait Islander infants aged up to 12 months
To reduce the rate of Sudden Infant Death

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Sexually transmitted diseases, Teenage pregnancies and births, Childbirth, Developmental disability	Diet and nutrition, breastfeeding, Smoking, Alcohol misuse	Health literacy, Self help, Social support	Physical environment, Housing, home and community infrastructure

b) Teenage Pregnancies and Births

Need for action

A high proportion of teenage pregnancies is unintended - approximately 50% of all teenage pregnancies end in abortion.[120] [121] Nonetheless, there were more than 15,000 births to teenagers in 1990, constituting 6% of all confinements. Twenty-five percent of all Aboriginal births are to teenagers, compared with 5% for non-Aboriginal births,[122] [123] [124] while in rural areas the rates of teenage pregnancy are higher than in metropolitan areas.[125]

Pregnancy and births occurring among teenagers can compromise the health and life chances of both mother and child. While the age specific birth rate among women aged less than 19 years declined from 55.2 per 1000 in 1971 to 21.3 per 1000 in 1990, a decline of over 60%,[126] young women of lower socioeconomic status are more likely to become pregnant than those whose socioeconomic status is higher. Teenagers have a greater risk of having low birthweight babies who are more likely to suffer physical or mental disability or infant death. Teenagers also have a greater risk of having **recurrent** low birth weight babies.[127] For the mothers, early child bearing can have direct effects on life chances, interrupting or halting education with later negative consequences for occupation and potential income.

While not all pregnancies among, and births to, teenage females are unintended, the high rate of abortion appears to confirm that many young women do become pregnant unintentionally. Reductions in unintended pregnancies have been shown to occur when people are well informed about sexuality and contraception, when they have access to appropriate contraceptive methods, and when they regularly use effective contraception.

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120 Chan A & Taylor A. 1991. *Medical Termination of Pregnancy in South Australia - the First 20 Years 1970-1989.* Pregnancy Outcome Unit, Epidemiology Branch, South Australian Health Commission, Adelaide. p 15.

121 Marshall J. 1986. *Teenage Pregnancy in New South Wales.* Masters Thesis. School of Public Health and Tropical Medicine, The University of Sydney. p 1.

122 Thomson N & Briscoe N. 1991. *Overview of Aboriginal health status in New South Wales.* Australian Institute of Health: Aboriginal and Torres Strait Islander Health Series No 5. Australian Government Publishing Service, Canberra. p 11.

123 Thomson N & Briscoe N. 1991. *Overview of Aboriginal health status in Queensland.* Australian Institute of Health: Aboriginal and Torres Strait Islander Health Series No 4. Australian Government Publishing Service, Canberra. p 11.

124 Thomson N & Briscoe N. 1991. *Overview of Aboriginal health status in the Northern Territory.* Australian Institute of Health: Aboriginal and Torres Strait Islander Health Series No 2. Australian Government Publishing Service, Canberra. p 10.

125 New South Wales Health Department. 1991. *NSW Midwives Data Collection.*

126 Australian Bureau of Statistics. 1990. *Births Australia 1990.* ABS, Canberra.

127 Read AW and Stanley FJ. 1992. Small-for-gestational-age term birth: the contribution of socioeconomic, behavioural and biological factors to recurrence. Submitted for publication.

Goal

To reduce unintended pregnancies among teenage women

Proposed targets

Priority population: Women less than 20 years
To reduce the rate of unintended births
Baseline: ABS Births Australia 1990: 21.3 per 1,000 women aged less than 20 years

Priority population: Aboriginal/Torres Strait Islander females 15 - 19 years
To reduce the rate of unintended births
Baseline: Age-specific fertility rates. Thomson N & Briscoe N. 1991. Overview of Aboriginal health status in the Northern Territory. AGPS, Canberra. 155 live births per 1,000 females aged 15-19 years; Thomson N & Briscoe N. 1991. Overview of Aboriginal health status in New South Wales. AGPS, Canberra. 80 live births per 1,000 females aged 15-19 years; Thomson N & Briscoe N. 1991. Overview of Aboriginal health status in Queensland. AGPS, Canberra. 110 live births per 1,000 females aged 15-19 years

Priority population: Women less than 20 years in rural and isolated areas
To reduce the rate of unintended births

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Perinatal and infant mortality, Abortion, Developmental disability	Contraception and family planning, Healthy sexuality	Health literacy, Social support	

c) Childbirth

Need for action

In 1990, there were 262,648 babies born in Australia.[128] Only 12% of these births occurred without medical intervention in the birth process.[129] Not only does Australia have a high rate of medical interventions, but there are also large differences in intervention rates among States. For example, in 1988, in South Australia 20.6% of births involved a caesarean section, while this rate was 15% in Tasmania.[130]

The average length of stay in hospital for those women who have caesarean sections is approximately two days longer than the average length of stay for those women who have a vaginal delivery with complicating diagnoses, and four days longer than for those women who have a vaginal delivery without complicating diagnoses.[131]

The World Health Organization found that countries with the lowest perinatal mortality rates have caesarean section rates under 10%.[132]

Goal

To reduce the number of medical interventions in birth and antenatal care

Targets

Priority population: Birthing women	level	year
To increase the proportion of birthing women who have normal, vaginal delivery	18%	2000

Baseline: Victorian Public Hospital Morbidity, 1989-90: Normal delivery 11.8% of all births

Proposed targets

Priority population: Birthing women

To reduce the proportion of caesarean deliveries to less than 15% of all deliveries

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Perinatal and infant mortality/morbidity, Urinary incontinence	Contraception and family planning	Health literacy, Life skills and coping, Self help, Social support	

128 Australian Bureau of Statistics. 1991. *1990 Births Australia.*

129 Australian Bureau of Statistics. 1989-90. *Victorian Public Hospital Morbidity.* p 8.

130 Andrew E. 1988. *I was in Stitches.* Handbook accompanying video of same name.

131 *Report of the Ministerial Review of Birthing Services in Victoria.* 1990. p 93.

132 World Health Organization. 1985. Appropriate Technology at Birth. *The Lancet.* 2: p 436-7.

d) Maternal Mortality and Morbidity

Need for action

The average Australian rate of death in pregnancy is extremely low (11.8 per 100,000 confinements) yet the rate among the Aboriginal/Torres Strait Islander population is much higher. They accounted for 15% of Australian maternal deaths between 1985 and 1987.[133]

There are no national survey figures currently available to permit any accurate comparative analysis of the reproductive health outcomes of women from non-English speaking backgrounds. However, regional and State data, together with those from several small-scale studies, suggest that some groups of NESB women suffer higher rates of certain poor reproductive health outcomes.[134]

A study comparing pregnancy and childbirth in Lebanese-born and Australian-born women in western Sydney also found certain antenatal and interpartum complications were more common in Lebanese-born women.[135]

Hospital separation rates for complications of pregnancy among Aboriginal and Torres Strait Islander women were almost twice those of the non-Aboriginal population in 1984-86.[136]

Goal

To reduce maternal mortality and morbidity

Proposed targets

Priority population: Aboriginal/Torres Strait Islander women who give birth
To reduce the maternal death rate to the national level
Baseline: NHMRC. 1991. Report on Maternal Deaths in Australia 1985-87. AGPS, Canberra

Priority population: NESB women who give birth (specified population groups)
To reduce the rate of antenatal and interpartum complications

Priority population: Aboriginal/Torres Strait Islander women who are pregnant
To reduce the proportion who experience complications of pregnancy

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
		Health literacy, Social support	Transport, Housing, home and community infrastructure

133 NHMRC. 1991. *Report on Maternal Deaths in Australia 1985-87*. Australian Government Publishing Service, Canberra.

134 Alcorso C & Schofield T. 1991. *The National Non-English-Speaking Background Women's Health Strategy*. Australian Government Publishing Service, Canberra. p 46.

135 Alcorso C & Schofield T. 1991. Ibid, p 46.

136 Thomson N. 1991. In: Reid J & Trompf P. Eds. *The Health of Aboriginal Australia*. Harcourt Brace Jovanovich Publishers, Sydney. p 53.

e) Abortion

Need for action

At age 16, 47% of Australian males and females have had some experience of intercourse. This increases to 88% at age 19.[137] The limited information on contraceptive use in Australia shows that all forms of contraception have been widely adopted. However, the proportion of teenagers using effective forms of contraception tends to be lower than among those who are in their mid-20s or older. As a consequence, abortion rates are highest in girls under 16 years.[138]

South Australia is the only state which requires notification of all abortions. For that reason, the South Australian information on trends in rates of abortion per 1,000 women since 1970 is the most complete in Australia. In South Australia, the rates of abortion have stabilised since 1983 to a rate of 12.9 to 13.1 per 1,000 women aged 15 to 44 years. The limited data available from other states showed higher rates in all States (14.0 to 19.5 per 1,000 women) except Queensland (12.7 per 1,000 women) and Tasmania (7.1 per 1,000 women).[139] In South Australia, the teenage abortion rate rose in the 1970s, reaching a peak in 1981, but has declined since then. The rates for women aged 20 - 34 years have increased since 1970, but for women aged 34 years or more there has been a decline.[140] The more stable rates in older women reflect greater use of effective contraception, including high rates of sterilisation. The proportion of pregnancies (based on live births and terminations) which end in legal abortion has been stable at 17 to 18% since 1978.

Siedlecky (1986) concluded that there is an increasing and continued acceptance of contraception among Australian women, that abortion has not replaced contraception as a method of birth control, that even with the persisting limitations on education and services for adolescents it is possible to reduce pregnancy and abortion rates in teenagers, and that those births which do occur must increasingly be wanted births.[141]

Although the most effective form of reversible contraception is the oral contraceptive pill, there are still many women who conceive inadvertently while taking the pill as their method of contraception. Some of the most common reasons include missing taking the pill or taking it late, diarrhoea and vomiting, and drug interactions. Some pills have a lower margin of safety than was initially suggested, resulting in a higher rate of inadvertent pregnancies.[142] No method of contraception, with the exception of sterilisation, is completely effective in preventing pregnancy.

Combined with initiatives to promote the use of effective contraception and to enhance the access of sexually active people, particularly young people and geographically and culturally isolated people, to such methods, the availability of safe abortion services is necessary for women who experience unplanned pregnancies and for women whose physical or emotional health would be jeopardised by pregnancy. Ultimately, trends in abortion reflect changes in the attitudes of the community, the medical profession, and the law.

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137 Goldman J and Goldman R. 1988. *Show Me Yours: Understanding Children's Sexuality*. Penguin Books, Australia. p 206.

138 Siedlecky S. 1986. Current usage of and attitudes towards contraception in Australia. *Healthright*. 6(1): 7-16.

139 Chan A & Taylor A. 1991. *Medical Termination of Pregnancy in South Australia - the First 20 years 1970-1989*. Pregnancy Outcome Unit, Epidemiology Branch, South Australian Health Commission, Adelaide. p 11.

140 Chan A & Taylor A. 1991. Ibid, p 13.

141 Siedlecky S. 1986. Ibid, p 15.

142 Kovacs G, Riddoch G, Duncombe P et al. 1989. Inadvertent pregnancies in oral contraceptive users. *Medical Journal of Australia* 150: 549-551.

Goal	Proposed targets
To reduce the number of abortions performed as a result of ineffective contraception	**Priority populations:** **Sexually active young people and adults** **Sexually active rural and isolated young people and adults** To reduce the number of abortions performed as a result of ineffective contraception **Priority population:** **Rural and isolated women** **Women from low socioeconomic groups** **NESB women** To increase access to safe, legal abortion facilities

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Teenage pregnancies and births	Diet and nutrition, Healthy sexuality, Reproductive health	Health literacy, Life skills and coping, Self help, Social support	

..8 Asthma

Need for action

Asthma mortality has increased in Australia by more than 60% between 1980 and 1990, predominantly among those aged over 65 years and in those aged 10-29 years. Asthma is also the leading cause of childhood hospital admissions, and has a prevalence of 1 in 5 children and 1 in 12 adults.

Although the relation between asthma prevalence and socioeconomic status is not clear, asthma management and therapy is better in more affluent groups.[143] [144] Disadvantage may manifest as reduced access to the health system, unacceptable costs of medication, and diminished quality of care.

Although asthma management is similar, rates of asthma prevalence, hospital admission, and mortality are considerably higher in Australia and New Zealand than in other developed countries.

Much of the mortality and morbidity from asthma is potentially preventable with appropriate management.

Goal

To reduce deaths and preventable morbidity from asthma

Targets

Priority population: The whole population less than 75 years	**level**	**year**
To reduce asthma mortality	-10%	1995
	-25%	2000

Baseline: ABS Causes of Death 1990: 5.1/100,000 population

Priority population:Young people and adults 10 - 29 years	**level**	**year**
To reduce asthma mortality	-20%	1995
	-50%	2000

Baseline ABS Causes of Death 1990: 1.9/100,000 population

Priority population: Children 5 - 12 years	**level**	**year**
To reduce the proportion of children who experience exercise induced asthma more than once a week	5%	1995
	3%	2000

Baseline: Bauman A, Mitchell C, Henry R. et al. 1992. Asthma morbidity: an epidemiological study. Medical Journal of Australia. 156: 827-831: 6%

Proposed targets

Priority population:
Children 5 - 14 years
Adults 15 - 44 years
To reduce readmissions to hospital for asthma

143 Bauman A, Young L, & Peat J. 1992. Asthma under-recognition and under-treatment in an Australian community. *Aust NZ Med J.* 22:36-40.

144 Young L, Comino E et al. Asthma management and socioeconomic status. Paper presented at the 9th Scientific Meeting of the Thoracic Society of Aust & NZ, Canberra, April 1992.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Diet and nutrition, Physical activity, Smoking	Health literacy, Life skills and coping, Self care, Self help, Social support	Physical environment, Transport, Housing, home and community infrastructure, Schools

..9 Diabetes Mellitus

Need for action

Diabetes is an important and increasing health concern, particularly in older Australians. Between 2 and 3% of Australians have diabetes, and this figure may double by the year 2000.[145] The prevalence at 60 years approaches 8%.[146] Results from successive ABS Health Surveys indicate that the prevalence of diabetes is increasing.[147] In addition, there has been a slight upward trend in diabetes mortality, from 11/100,000 in 1980, to 13/100,000 in 1990.

Diabetes is a common cause of chronic kidney disease and blindness, and is strongly associated with the development of coronary heart disease and peripheral vascular disease. About 85% of diabetics have non-insulin dependent diabetes (Type 2 diabetes), the onset of which is related to lifestyle factors such as body weight, dietary intake, and physical activity. The remaining 15%, mainly children and young adults, have insulin dependent diabetes (Type 1 diabetes), and require injections of insulin daily. The prevalence of Type 1 diabetes approaches 0.5% (estimate, Diabetes Australia).

Some population groups, for example, Southern Europeans, South Pacific Islanders, and Aboriginals/Torres Strait Islanders, have much higher rates of diabetes (up to 20% of adults).

There is clear evidence of the association between Type 2 diabetes and obesity. At least 80% of individuals with Type 2 diabetes are overweight or obese at the time of diagnosis.[148] The maintenance of a lean body weight in young people with a family history of Type 2 diabetes may well be critical in reducing the prevalence of Type 2 diabetes in Australia.[149]

A combination of early diagnosis, appropriate management of the condition and careful management of diet, body weight, and physical activity are considered to be important ways of limiting some of the morbidity associated with diabetes.

Although the epidemiological evidence which links optimal control of diabetes with a reduction in morbidity remains unclear, Diabetes Australia has proposed a set of targets for the reduction of end-stage complications (morbidity) which result from diabetes.

Goals	Target		
To reduce premature mortality and morbidity attributable to diabetes	**Priority population: The whole population**	**level**	**year**
	To reduce mortality from diabetes	-14%	2000
	Baseline: ABS. 1990: 12.8/100,000		
	Proposed targets (adapted from those proposed by Diabetes Australia)		
To reduce the rate of increase in incidence of diabetes	**Priority population: The whole population** To reverse the current upward trend in overall prevalence of diabetes		

145 Diabetes Australia. 1991. *National Action Plan - Diabetes 2000.*

146 Australian Bureau of Statistics. 1991. *National Health Survey 1989/90.* Australian Government Publishing Service, Canberra.

147 Australian Bureau of Statistics. 1991. *National Health Survey 1989/90: Diabetes, Australia.* Australian Government Publishing Service, Canberra.

148 NHMRC. Panel to Review the Dietary Guidelines. 1992. *Dietary Guidelines for Australians.* NHMRC, Canberra. p 30.

149 NHMRC. Panel to Review the Dietary Guidelines. 1992. Ibid, p 31.

Priority population: Aboriginal/Torres Strait Islander adults 18 years or more
To reduce the prevalence of Type 2 diabetes in Aboriginal communities from 10-15% to that in non-Aboriginal communities (2-3%)

Priority population: NESB adults 18 years or more in populations in which prevalence of diabetes is greater than among the Australian-born population
To reduce the prevalence of Type 2 diabetes in these communities

Priority population: People diagnosed as having diabetes
To reduce rates of diabetes-related complications, including new blindness, end-stage diabetic kidney failure, limb amputations, and coronary heart disease mortality and morbidity

Priority population: Pregnant women diagnosed as having diabetes
To reduce adverse pregnancy outcomes toward those of the non-diabetic population

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular mortality and morbidity, Sight disorders	Diet and nutrition, Overweight and obesity, Physical activity, Smoking	Health literacy, Self care, Social support	Schools

.0 Mental Health Problems And Disorders

Mental health problems and mental disorders afflict at least 20% of the Australian community at any one time.[150] They cause suffering for those directly affected, and often for their families/carers, and also loss of productivity. Not only is it important to prevent mental health problems and mental disorders but it is critical to see mental health as a positive attribute, to be developed as a resource for individuals and communities. Mental health is more than the absence of mental disorders and problems. It involves the affective, relational, and cognitive abilities of individuals, and their capacity to interact in satisfying ways with their social groups, and the environment. It reflects positive wellbeing.

Mental health problem is a term used to encompass common mental complaints and symptoms such as depression and anxiety, and includes those aspects of mental ill health occasionally suffered by healthy members of the general community in relation to normal life stress.

Mental disorder refers to the serious spectrum of mental illness such as schizophrenia, personality disorder, major depression, and post traumatic stress disorder.

The distinction between a mental health problem and a mental disorder is made on the basis of severity - there is some overlap between the two groups.

They have been grouped as follows with goals and targets set for each:

- Schizophrenia and severe mental disorder
- Organic mental disorder
- Post traumatic stress disorder
- Depression, anxiety disorders, somatization syndromes
- Conduct disorders

Prevalence of mental health problems and mental disorders

Estimates of one-year prevalence of common mental disorders and mental health problems in the Australian population are:

• schizophrenia	1.0%
• major depression	3.7%
• alcoholism: males	11.9%
females	2.2%
• generalised anxiety disorder	1.7%
• somatization disorder	4.0%
• anti-social personality disorder	1.2%
• severe cognitive impairment in persons aged 55 years or more	3.3%[151]

Mortality and morbidity from other causes is higher among people with mental disorders.[152] [153] [154] Substance abuse is also common among those with other mental disorders.

Mental health problems and mental disorders are much more common among lower socioeconomic groups who are less likely to have access to effective public or private care. This disadvantage is multiplied for Aboriginal people, and for rural and isolated communities[155] who may suffer additional cyclic crises such as rural recessions or drought.

150 Mental Health Committee, NHMRC. 1992. *Draft Report on Prevention in the Mental Health Field.* Paper prepared for the Health Care Committee, NHMRC.

151 Henderson S. 1992. Personal communication.

152 Lewinsohn PM, Rohde P, Seeley JR and Hops H. 1991. Co-morbidity of unipolar depression: I Major depression with dysthymia. *Journal of Abnormal Psychology*. 100(2): 205-213.

153 Rohde P, Lewinsohn PM & Seeley JR. 1991. Co-morbidity with other mental disorders in adolescents and adults. *Journal of Abnormal Psychology*. 100(2): 214-222.

154 Hecht H, von Zerssen D, Krieg C, Possl J & Wittchen H-U. 1989. Anxiety and depression: co-morbidity, psychopathology and social functioning. *Comprehensive Psychiatry*. 30(5): 420-433.

155 Aboriginal Medical Service Co-operative Ltd. May 1991. *NSW Aboriginal Mental Health Report.*

There are significant gender differences, too. Men are more likely than women to suffer from personality disorders and alcoholism, while women are two to three times more likely to experience affective disorders, including severe or general depression, anxiety, sleep disorders, general distress, and demoralisation.[156]

Australian community-based studies suggest that mental illness is more prevalent in NESB immigrants.[157] Poor mental and emotional health is more common among women born in Southern Europe and other NESB countries (excluding Asian countries) than women born in Australia or an English-speaking country.[158]

Issues affecting NESB immigrants in particular include cultural loss, dislocation, and the potential trauma of their refugee status prior to coming to Australia.

Mental health problems, like many major chronic physical health problems, result from multiple factors. Isolation and lack of social support, exposure to abuse (including psychological abuse) and violence, or the stress of common life events (beginning school, leaving school, entering the work force, unemployment, divorce, and bereavement, for example) have all been shown to be linked with the onset of mental health problems or mental disorders. These disadvantages are further exacerbated by socioeconomic disadvantage, Aboriginality, limited English language skills, and living in rural or isolated settings.

In its conclusions, the NSW Aboriginal Mental Health Report 1991 states, 'The likelihood of the presence of a mental health problem and/or a mental disorder in an individual is increased by a childhood history of separation from biological parents, neglect, or institutionalisation. Furthermore, vulnerability is increased by employment difficulties, especially if associated with chronic illness and lack of skills or education.' [159]

Many people with mental health problems or disorders experience delays in receiving effective treatment, or their disorders are not recognised when they present to settings such as primary health care. It is critical that early detection and effective management programs are in place in both physical health care and mental health care settings, and that those with mental health problems or disorders are referred appropriately for treatment and care. Problems and disorders should be understood and responded to in culturally sensitive ways with understanding of the individuals' cultural backgrounds.

There is also evidence that by reducing the stressor effects of life events, and by reducing exposure to abuse, violence, and stressful environments, it is possible to lower the risk of developing mental health problems and disorders or their recurrence.[160]

Although ways of reducing mental health problems and mental disorders in Aboriginal/Torres Strait Islander communities are unclear the positive aspects of family and community life of Aboriginal and Torres Strait Islander society may be built upon.[161]

The stigma and discrimination they often experience leads to many additional problems for those suffering from mental health problems or disorders. The lack of understanding of mental health problems and disorders by the wider community must be addressed actively for it affects the mental health of the community as a whole.

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156 National Health & Medical Research Council. 1991. *Women and Mental Health.* Number 1, Monograph Series. NHMRC, Australian Government Publishing Service, Canberra.

157 Minas H. 1991. *Mental Health Services for Immigrant Communities.* Paper presented at the annual meeting of the Federation of Ethnic Communities Councils of Australia, Sydney. p 3.

158 Alcorso C & Schofield T. 1991. *The National Non-English Speaking Background Women's Health Strategy.* Australian Government Publishing Service, Canberra. p 45.

159 Wronski I & Smallwood G. 1991. Ibid, p 41.

160 Mental Health Committee, NHMRC. 1992. Ibid.

161 Wronski I & Smallwood G. 1991. *Aboriginal and Torres Strait Islander Health Goals and Targets* (Interim) Aboriginal & Torres Strait Islander Commission, Canberra. p 41.

Children and Young People

At least 10 to 15% of Australian children and young people aged 0-18 years suffer from mental health problems or mental disorders at any time.[162] Epidemiological studies have indicated that many mental illnesses commonly have an onset around 16 years of age.[163] [164] Mental disorders and mental health problems which develop during this period are likely to be chronic and to impact on children's psychosocial development, and their achievements in school and other settings.

The mental health problems or disorders most commonly found among children and adolescents include conduct disorders, body image and eating disorders (particularly among young women), risky sexual behaviour, and suicide attempts. Among children and adolescents there are strong associations between levels of disorder in childhood and parental discord and disharmony, family violence, abuse (physical and/or sexual), stressful life experiences such as parental death and loss, exposure to violence and disasters, and adverse school environments. Disorders in childhood increase the risk of disorder in adult life.

As is the case among adults, the likelihood of developing mental health problems or disorders is greater among young Aboriginals/Torres Strait Islanders, NESB immigrants, those living in rural or isolated settings or those who are socioeconomically disadvantaged than among their more advantaged, urban counterparts.[165] [166] [167]

National Mental Health Policy

The Australian Health Ministers' Conference recognised the overall impact of mental illness on the community and adopted a National Mental Health Policy and Plan in April 1992. The aims of the Policy are to:

- promote the mental health of the Australian community, and, where possible, prevent the development of mental health problems and disorders;
- reduce the impact of mental health problems and disorders on individuals, families and the community;
- assure the rights and responsibilities of people with mental disorders.

This part of the report was developed on the basis of recommendations of a workshop held in Brisbane on 27 August 1992.

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162 Sawyer MG, Sarris A, Baghurst PA, Cornish CA & Kalucy RS. 1990. The prevalence of emotional and behaviour disorders and patterns of service utilisation in children and adolescents. *Australian and NZ Journal of Psychiatry.* 24:323-330.

163 Kosky R & Hardy J. 1992. Mental health: is early intervention the key? *Medical Journal of Australia* 156:147-8.

164 Connel HM, Irvine L & Rodney J. 1982. Psychiatric disorder in Qld primary school children. *Australian Paediatric Journal.* 18:177-180

165 McKendrick J. July 1988 Psychiatric morbidity in urban Aboriginal adults: a cause for concern. In: Chie E & Minas H. *Mental Health in Ethnic Communities - Proceedings of a Symposium.* Department of Psychiatry, University of Melbourne.

166 Herrman H & Burgess P. 1991. Social factors in psychiatry: a context for the consideration of cultural diversity in mental health. In: Minas H. *Cultural Diversity and Mental Health.* Proceedings of the 14th Annual Symposium of the Section of Social and Cultural Psychiatry. RANZCP, Melbourne.

167 Aboriginal Medical Service Co-operative Ltd. May 1991. *NSW Aboriginal Mental Health Report.*

a) Schizophrenia and Severe Mental Disorder

Need for action

Schizophrenia occurs in 1% of adults aged 20 years and older per annum.[168] Other serious mental illnesses, such as affective disorders, occur in as much as 5% of the population aged 20 years or more in the course of a year.[169] The onset of mental disorder usually occurs in late adolescence, disrupting career development and social maturation.

Costs to the community from schizophrenia and other mental disorders are high. Estimates suggest that the costs of schizophrenia alone amount to at least $139 million dollars per year in Australia.[170]

There is limited evidence of intervention resulting in reduction in the prevalence of schizophrenia but there has been at least one recent study showing positive effects following a well-executed early intervention program.[171] However, many people do not receive early and effective treatment. It has been proposed that a prolonged period before treatment adds to long-term disability.[172] Secondary traumatic effects of the illness and its treatment may add additional morbidity. People with schizophrenia are at increased risk of committing suicide, while many are also at increased risk of alcohol abuse and illicit drug use.

The families of people with schizophrenia are also at increased risk of developing mental health problems as a result of the stress of involvement with a schizophrenic family member. The children of parents with psychiatric illness may not only be genetically vulnerable but often suffer increased stress, adding to their own vulnerability.

A recent report prepared by the Mental Health Committee of the National Health & Medical Research Council, *Prevention in the Mental Health Field*[173] has outlined a series of models of intervention and concludes that there is sufficient evidence to enable setting targets to reduce the prevalence of schizophrenia, and to reduce its impact on both individuals with the disorder and their carers.

Goals	Proposed targets
To substantially reduce mortality and morbidity associated with mental disorders	**Priority population: All young people and adults 13 years or more** To reduce the prevalence of mental disorders **Priority population: Young people 16 - 20 years** To reduce the prevalence of mental disorders **Priority population: People with recurrent and/or prolonged mental disorders**[174] To reduce the prevalence of mental disorders, social isolation and homelessness

168 Henderson, S. 1992. Personal communication.

169 Henderson S. 1992. Personal communication.

170 Andrews G. Costs of Schizophrenia revisited. *Schizophrenia Bulletin*. 17 (3): 389-394.

171 Falloon IRH. 1992. Early intervention for first episodes of Schizophrenia: a preliminary exploration. *Psychiatry*. 55:4-15.

172 McGorry P. 1991. Paradigm failure in functional psychosis: review and implications. *Australian and New Zealand Journal of Psychiatry*. 25(1):43-45

173 Mental Health Committee, NHMRC. 1992. Ibid.

174 Herrman H (1992) points out that both access to adequate housing and effective services is necessary in order to achieve a reduction in the ill health suffered by this population group. Herrman H. 1992. A survey of homeless mentally ill people in Melbourne, Australia. *Hospital and Community Psychiatry*. 41(12):1291-1292.

To substantially reduce the incidence and prevalence of mental health problems and mental disorders in children and adolescents

Priority populations:
People with mental disorders
NESB people with mental disorders
To reduce the rate of involuntary admission to psychiatric hospitals

Priority population: People with mental disorders
To reduce the rate of secondary (e.g. traumatic) morbidity[175]

Priority population: People with mental disorders
To reduce the incidence of suicide

Priority population: People with mental disorders
To reduce the prevalence of physical health problems

Priority population: Carers of people with mental disorders, disabled people, the terminally ill, young adults with head injury, older people
To reduce the proportion who suffer mental ill health

Priority population: Carers of people with mental disorders, disabled people, the terminally ill, young adults with head injury, older people
To reduce the proportion who experience social isolation

Priority population: Children of people with mental health problems and mental disorders
To reduce the prevalence of mental health problems

Priority population: Aboriginal/Torres Strait Islander adolescents and adults
To reduce the prevalence of mental disorders

Priority population: NESB immigrant adolescents and adults
To reduce the prevalence of mental disorders

Cross reference targets

See end of part 2.1.10

175 Secondary morbidity: sometimes known as co-morbidity, that is, co-existing disorders such as depression overlayed on schizophrenia or physical illness

b) Organic Mental Disorder

Need for action

Organic mental disorder includes the dementias or disorder caused by the effects of trauma (often the result of motor vehicle accidents) or as the sequelae of a cerebral disease or lesion.

People aged 75 years or more are at greatest risk of developing dementia, but more than 3% of the population aged 55 years or more suffers from severe cognitive impairment.

Those suffering organic mental disorder as a result of trauma, on the other hand, tend to be young males injured in motor vehicle crashes - often associated with alcohol consumption.

Reducing the number of young males injured in road crashes will lead directly to a reduction in the number suffering organic mental disorder as a result of head injuries.

Goal

To reduce the prevalence of preventable organic mental disorder

Proposed targets

Priority population: People 55 years or more
To reduce the incidence of preventable dementia

Priority population: Illicit drug users
To reduce the incidence of drug-induced psychosis

Priority population: People 15 - 25 years
To reduce the incidence of traumatic brain injury

Cross reference targets

See end of part 2.1.10

c) Post-traumatic Stress Disorder

Need for action

Post traumatic stress disorder occurs in up to 30% of people who have been the victims of violent crime or who have been subjected to violence or other extreme or extraordinary experiences. Preliminary data from the Australian Vietnam Veterans' Health Study indicates that up to 30% of combat-exposed veterans suffer from the disorder, similar to American findings.[176] The disorder is frequently chronic, morbidity is substantial and may last many years, disrupting functioning in work, personal and social relationships.

A recent study funded by the Bureau of Immigration Research examined the experience of a NSW sample of 204 refugee women in their first four years in Australia. 73% had suffered from either a medium or high degree of trauma and torture. It is likely that two-thirds of all refugee women in Australia suffer ongoing serious mental and emotional disability arising from their pre-immigration experience. These may persist for many years after arrival, interacting with settlement problems.[177]

It may be possible to reduce the morbidity associated with the disorder. Reduction of levels of violence in the community is likely to have the greatest effect, but for those who suffer the disorder a number of methods have been found to be effective in reducing levels of longer-term morbidity. These include both professional assistance and self help.[178]

Goal	Proposed targets
To reduce morbidity associated with post traumatic stress disorder	**Priority population: Children, young people and adults who have been subjected to childhood physical and/or sexual abuse** To reduce the incidence of post traumatic stress disorder **Priority population: Women who have been subjected to domestic violence** To reduce the incidence of post traumatic stress disorder **Priority population: People who are victims of crime** To reduce the incidence of post traumatic stress disorder **Priority population: People who have been victims of torture and trauma (refugee and immigrant populations)** To reduce the prevalence of post traumatic stress disorder **Priority population: Emergency workers exposed to trauma** To reduce the incidence of post traumatic stress disorder

Cross reference targets

See end of part 2.1.10

176 O'Toole BI, Marshall RP, Grayson DA & Shureck JP. 1992. *Epidemiological study of psychological dysfunction in traumatic stress victims*. Paper delivered at Women, Men and Mental Health Seminar, Royal Brisbane Hospital, Department of Psychiatry.

177 Alcorso C & Schofield T. 1991. Ibid, p 52.

178 Mental Health Committee NHMRC. 1992. Ibid.

d) Depression, Anxiety Disorders, Somatization Syndromes

Need for action

This group of disorders is extremely common in the community. The Epidemiologic Catchment Area Studies report that major depression has a one-year prevalence of 3.7% among people aged 20 years or more.[179] They are frequently chronic, with 20% of episodes lasting longer than one year. People aged 20 - 45 years most commonly suffer from depression, with twice as many women as men so affected. Women also have higher rates of recurrence and less favourable outcomes. Cubis reported that 15 to 29% of Australian adolescents suffer from depression at any one time.[180] Among older people, the death of a spouse and/or friends can lead to depression, while those caring at home for someone who is mentally ill, dying and/or frail also have an increased risk of depression.

Depression in its major and minor form is very common among the clients of primary medical care, occurring in at least 16 to 20% of presenting clients; among hospital in-patient populations, rates might be as high as 22 to 33%.[181] It is also associated with increased mortality from suicide.

Depression, anxiety, and somatization disorders are also common among socioeconomically disadvantaged groups, among Aboriginals/Torres Strait Islanders, and among some NESB immigrant groups but may not be recognised nor effectively managed because of a lack of recognition of cultural patterns of disorder and access to culturally-appropriate mental health services.[182] A population-based study of recently-delivered women in Victoria found a prevalence of post-natal depression of 15.4% eight months after the birth. In a follow-up study, over one third of the women who were depressed 8 - 9 months post-partum, were also depressed when their infants were 18 months - 2 years old.[183]

The stress of caring for people with mental disorders, or for other people who are dependent because of age, disability or physical illness, can often lead to depression and mental health problems on the part of the carers.

It may be possible to reduce the prevalence of depression following early detection and effective treatment.[184] [185] Membership of self help and support groups and developing social networks has also been shown to help.[186] Among women suffering post-natal depression there is evidence that participation in community-based support groups is an effective means of reducing the severity and impact of the condition.

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179 Mental Health Committee, NHMRC. 1992. Ibid.

180 Cubis J C. 1990. *Minor psychiatric Morbidity in mid to late Adolescence – Changes in Prevalence and Relationships with Parental Perception.* Thesis submitted to the University of Newcastle, Doctorate of Philosophy.. Research grant proposal, NSW Institute of Psychiatry.

181 Katon W. 1987. The epidemiology of depression in medical care. *International Journal of Psychiatry in Medicine.* 17(1): 93-112.

182 Mental Health Committee, NHMRC. 1992. Ibid.

183 Brown S, Lumley J, Small R, & Astbury J. 1992. Centre for the Study of Mothers' and Children's Health, Monash University. Personal communication.

184 Kupfer DJ, Frank E, Perel JM. 1989. The advantage of early treatment intervention in recurrent depression. *Archives of General Psychiatry.* 46: 771-775.

185 Viney L, Benjamin Y, Clark A & Bunn T. 1985. Crisis intervention counselling: an evaluation of long and short-term effects. *Journal of Counselling Psychology.* 32(1): 29-39.

186 Mental Health Committee, NHMRC. 1992. Ibid.

Goal	Proposed targets
To reduce the incidence and prevalence of depression and related disorders and mortality associated with them	**Priority population: Women 16 years or more** To reduce the prevalence of depression **Priority population: All children, young people and adults from low socioeconomic groups** To reduce the prevalence of depression **Priority population: People 60 years or more** To reduce the prevalence of depression **Priority population: All Aboriginals/Torres Strait Islanders 13 years or more** To reduce the prevalence of depression **Priority population: All people of non-English speaking background 13 years or more** To reduce the prevalence of depression **Priority population: All women who have recently given birth** To reduce the severity and duration of depression **Priority population: People who have been bereaved within the last 12 months** To reduce the incidence of depression, anxiety and related disorders **Priority population: Females 12 - 16 years** To reduce the proportion suffering body image disorders - anorexia nervosa, bulimia **Priority population: Males 15 - 29 years** To reduce the incidence of suicide **Priority population: Aboriginal men in custody** To reduce the incidence of suicide **Priority population: Widowed males 55 years or more** To reduce the incidence of suicide

Cross reference targets

See end of part 2.1.10

e) Conduct Disorders

Need for action

A recent Australian study of children and young people aged 5 to 18 years in socioeconomically disadvantaged schools found that 13.9 ±5.3/100 were identified as having suffered conduct disorders within the previous 6 months.[187] Many young men who do not receive adequate assistance with these end up in the justice system, while young women tend to go on to experience depression, early parenting, and separation and dislocation from their families.

Early recognition and treatment of these disorders has been shown to be effective.[188] [189] [190] Further work to develop preventive measures is being undertaken.

Goal	Proposed targets
To reduce the incidence and prevalence of conduct disorders among children and young people	Priority populations: Children and young people 5-18 years Children and young people 5-18 years from low socioeconomic groups Aboriginal/Torres Strait Islander children and young people 5-18 years NESB children and young people 5-18 years Homeless children and young people 5-18 years To reduce the prevalence of conduct disorders

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury	Diet and nutrition, Quality use of medicines, Alcohol misuse, Illicit drug use, Mental health	Health literacy, Life skills and coping, Safety skills, Self help, Self care, Social support	Housing, home and community infrastructures, Schools, Work and the workplace

187 Sawyer MG, Sarris A, Baghurst PA, Cornish CA & Kalucy RS. 1990. The prevalence of emotional and behaviour disorders and patterns of service utilisation in children and adolescents. *Australian & NZ Journal of Psychiatry*. 24:323-330.

188 Ramey CT, MacPhee D & Yates KD. 1982. Preventing developmental retardation: a general systems model. In: Bond L. & Joffee J. (Eds). *Facilitating infant and early childhood development*. New Hampshire University Press of New England, Hanover.

189 Rae-Grant N. 1988. Primary prevention: implications for the child psychiatrist. *Canadian Journal of Psychiatry*. 33: 433-442.

190 Shure MB & Spivak G. 1987. Competence-building as an approach to prevention of dysfunction: the ICPS model. In: Steinberg JA & Silverman MM (Eds): *Preventing mental disorders: a research perspective*. National Institute of Mental Health, United States Department of Health and Human Services, Rockville, Maryland. pp 124-139.

1 Physical Impairment And Disability

a) Musculoskeletal Disorders

Need for action

Arthritis and musculoskeletal disorders are major causes of pain and disability in the community, especially among older people. About one third of adults aged 25 to 64 years report chronic illnesses associated with musculoskeletal and connective tissues. The prevalence rises to almost 50% of males aged 65 and over and 57% for older females.

In a recent survey, the prevalence of arthritis was more common in older age groups (45% of persons aged 70 years or more) and back problems were more common in middle age (15% of persons aged 45 to 69 years). A third of those people with disorders of an intervertebral disc reported that their condition was caused by an accident.[191]

The Australian Health Survey 1989-90 showed that the self-reported prevalence of arthritis was 83/1000 for males and 129/1000 for females. Furthermore, the results demonstrated clear socioeconomic differences in the prevalence of arthritis, with low socioeconomic status males and females both reporting much greater prevalence than those whose socioeconomic status was higher.

While knowledge of ways to prevent the occurrence of arthritis and musculoskeletal disorders is limited, reduction in low back disorders and soft tissue rheumatism is thought to be feasible, particularly by preventing work-related back injuries. The impact of arthritis on functional status can be reduced by non-weight-bearing exercise and weight control.

Congenital musculoskeletal disorders are among the commonest congenital defects, and occur in 1.25% of all births.[192] About half these disorders are congenital dislocations of the hip. The morbidity from congenital dislocation of the hip is preventable if this condition is detected and treated early following appropriate screening.[193]

Targets for work-related injury, including back injury, are being developed by Worksafe Australia and are not included here.

191 Australian Bureau of Statistics. 1991. *1989-90 National Health Survey. Musculoskeletal Conditions, Australia.* ABS, Canberra.

192 Bower C et al. 1989. Screening for congenital dislocation of hip by child health nurses in Western Australia. *Medical Journal of Australia* 150(2): 61-5.

193 Waddell V & Lee N. Eds. 1991. *Our State of Health: an overview of the health of the Western Australian Population.* Health Department of Western Australia. p 58.

Goal

To reduce prevalence and morbidity associated with musculoskeletal disorders

Proposed targets

Priority population: All those who have been diagnosed as having arthritis
To improve functional status (measures of functional status to include: a decrease in the chronic limitation of movement imposed by these disorders, and a decrease in the limitations in carrying out usual daily activities such as household tasks, work and social activities)

Priority population: All those who have been diagnosed as having arthritis
To increase the proportion who are physically active, and who perform appropriate exercises during exacerbations

Priority population: All live births
To increase the proportion of babies whose congenital dislocation of the hip is detected at birth

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury, Diet and nutrition, Overweight and obesity, Physical activity	Diet and nutrition, Overweight and obesity, Physical activity, Quality use of medicines, Alcohol misuse, Illicit drug use, Mental health	Health literacy, Self care, Self help, Social support	Transport, Housing, home and community infrastructure, Work and the workplace

b) Osteoporosis

Need for action

This important condition is thought to affect between 30 and 50% of all older women, and increases in incidence with increasing age. The condition is a risk factor for many fractures, including fractured hips. Preventive approaches include the regular consumption of dietary calcium throughout life, and the maintenance of regular physical activity. Hormone Replacement Therapy is also associated with reduced risk of hip fractures.[194] Smoking and alcohol are thought to be risk factors for the development of the condition.

Goal	Proposed Target
To reduce the incidence of osteoporosis in older women	**Priority population: Women over 50 years** To reduce the incidence of osteoporosis in older women through regular lifetime dietary calcium intake, regular physical activity.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury (Residential injuries)	Diet and nutrition, Overweight and obesity, Physical activity, Smoking, Alcohol misuse	Health literacy, Self care	

194 Naessen T et al. 1990. Hormone Replacement Therapy and risk of hip fracture. *Journal of American College of Physicians.* 113(2): 95-103.

c) Sight Disorders

Need for action

Sight disorders are an important source of morbidity in the community but prevalence data are not readily available. Blindness due to retinal degeneration is especially a problem among older women. The limited data available suggest that sporting accidents are an important preventable cause of eye injuries causing vision impairment.[195] Other potentially preventable causes include vision impairment secondary to diabetes, glaucoma and cataracts, and the early detection and correction of several childhood sight disorders.

The prevalence of preventable eye disorders among Aboriginals is unacceptably high. Between 1976 and 1979, the National Trachoma and Eye Health Program surveyed almost 62,000 Aboriginals and more than 38,000 non-Aboriginals, largely in rural and remote areas of Australia.

The Program found that the proportion of blindness for the Aboriginals examined was 15/1000, compared with 2/1000 for non-Aboriginals. Of the people examined aged 60 years or more, 1 in 5 Aboriginals was blind, compared with about 1 in 20 non-Aboriginals. A large proportion of the avoidable blindness among Aboriginals was secondary to trachoma, a form of conjunctivitis caused by the bacterium *Chlamydia trachomatis*.

To achieve reductions in the prevalence and severity of trachoma, substantial improvements in the living conditions of Aboriginals in rural Australia are necessary. The cornerstone of appropriate strategies is seen as community-based action, including the provision of equipment and services to permit improvements in personal hygiene. Treatment and surveillance campaigns need to be maintained and probably expanded.[196]

Goal

To reduce the incidence of eye injury or infection causing blindness or loss of sight

Proposed targets

Priority population: All Aboriginals/Torres Strait Islanders living in rural communities
To reduce the prevalence of blindness caused by trachoma

Priority population: All children 0 - 12 years
To detect and correct childhood sight disorders (undetected amblyopia, strabismus and refractive errors)

Priority population: All people playing sport[197]
To reduce the incidence of injuries causing vision impairment

Priority population: The whole population
To reduce the prevalence of blindness caused by glaucoma

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury, Diabetes, Developmental disability	Safety behaviours	Health literacy, Self help, Social support	The physical environment, Housing, home and community infrastructure, Work and the workplace, Schools

195 Ng TK, Rogers JS & Kelly M. 1984. Eye Injuries in Adults in NSW. III. Injuries not Related to Work. Commonwealth Institute of Health, University of Sydney, Royal Australian College of Ophthalmology, Australian and New Zealand College of Occupational Medicine.

196 Thomson, N. 1991. A Review of Aboriginal Health Status. In: Reid J & Trompf P. *The Health of Aboriginal Australia*. Harcourt Brace Jovanovich Publishers, Sydney. p 59.

197 (particularly squash, football, tennis)

d) Hearing Disorders

Need for action

In 1988 the Australian Bureau of Statistics conducted a *Survey of Disabled and Aged Persons*. Based on self-report, hearing impairment was found to be the second most common disability in the community.[198] Whereas sight problems are more common among older women, deafness is more common among older men.

Occupational hearing loss is the primary cause of noise-induced hearing loss. Although the data on occupational hearing loss in Australia are limited, during the period 1980-81 to 1986-87 there were at least 10,000 successful worker's compensation claims for occupational hearing loss per year.[199] This underestimates the true prevalence of the problem of occupational hearing loss. Targets relating to occupational hearing loss are being developed by Worksafe Australia.

Considerable effort has been made in Australia to control workplace noise exposure, with some, albeit limited, success. Legislation to control noise and measures to ensure employer compliance, together with measures to ensure that workers use hearing protectors, would ensure a reduction in occupational hearing loss.

Among children, delayed diagnosis of sensorineural deafness is associated with delayed speech development. There is overseas evidence that hearing screening programs can lead to reductions in the age of identification of children with a moderate, severe or profound bilateral deafness.[200]

The high level of chronic middle ear disease among Aboriginals, particularly children, does not appear to have decreased over the last 15 to 20 years.[201] The prevalence of perforations of the eardrum (generally between 10% and 30%), and of hearing loss (generally between 10% and 40%) among Aboriginals is unacceptably high.

Progress is being made in understanding the aetiology of middle ear disease (otitis media) in Aboriginal infants. Preliminary work suggests a relationship between the onset of otitis media in infants and early colonisation of the nasopharynx by certain bacterial pathogens.[202] Greater attention has been paid to its well-recognised, major complication - conductive hearing loss sufficient to affect adversely the acquisition of language and literacy skills.[203]

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198 Waugh R. 1990. *Occupational noise exposure, hearing impairment and rehabilitation - an overview of the present position in Australia.* Worksafe Australia & The University of New England, Armidale. Paper presented at a national seminar series. p 27.

199 Waugh R. 1990. Ibid, p 25.

200 Watkin PM. 1991. The age of identification of childhood deafness - improvements since the 1970s. *Public Health* 105(4): 303-12.

201 Bear V. 1985. Chairman's welcome. In: Australian Deafness Council. *Ear disease in Aboriginal children: proceedings of a seminar held in Perth, 8 September 1985.* p 6,7.

202 Leach AJ, Boswell JB, Asche LV, Hienhuys TC & Mathews JD. 1992. (In press). *Moraxella (Branhamella) catarrhalis and early onset of otitis media in Aboriginal infants.* Doctors' Fund and menzies School Symposium on Aetiology of Otitis Media in Aboriginal Infants. Menzies School of Health Research, Darwin.

203 Thomson N. 1991. A Review of Aboriginal Health Status. In: Reid J & Trompf P, Eds. *The Health of Aboriginal Australia.* Harcourt Brace Jovanovich Publishers, Sydney. p 58.

Goal	Proposed targets
To reduce the incidence and consequences of hearing loss	**Priority population: Aboriginal/Torres Strait Islander children 0 - 12 years** To reduce the prevalence of hearing loss associated with chronic ear disease **Priority population: Children 0 - 1 year** To increase the proportion with sensorineural deafness who are correctly diagnosed within one year of onset

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Safety behaviours	Health literacy, Self help, Social support	The Physical environment, Housing, home and community infrastructure, Work and the workplace, Schools

e) Urinary Incontinence

Need for action

Problems with bladder control, to some degree, are thought to affect almost a million Australians. Rates are substantially higher in women than in men, and are most problematical after childbirth and around and following the menopause. These problems in women can partly be prevented, for example, by the regular practice of pelvic floor exercises.

Goal	Proposed target
To reduce the proportion of women affected by urinary incontinence	**Priority population: All women 20 years or more** To reduce the proportion affected by urinary incontinence

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Childbirth		Health literacy, Self care	

2.1.12 Developmental Disability

Developmental disability is a frequent consequence of congenital and genetic disorders. Prevalence of developmental disability is between 2 and 3% of the Australian population. A proportion of this disability is preventable. For those individuals whose developmental disability, given current knowledge, is not preventable, there is a need to lessen the impact of this disability, both on their lives, and on the lives of those who provide care for them.

a) Preventable Disability

Need for action

A proportion of preventable disability is associated with low birth weight and prematurity. Reduction in prevalence of risk factors for these conditions is important. Some of the key risk factors are smoking, social disadvantage, and antepartum genito-urinary tract infection.[204] [205] [206] [207] [208] Genetic counselling is another important means of reducing the incidence of new disability.

Primary prevention of neural tube defects is also likely to be possible by increasing folate intake around the time of conception. Reduction in the frequency of recurrence of neural tube defects in subsequent pregnancies by increasing folate intake has been demonstrated.[209]

Goal

To reduce the incidence of new developmental disability

Target

Priority populations: Women 15-44 year who have had a child with a neural tube defect	level	year
To reduce the occurrence of neural tube defect in infants born to mothers who have had an affected child *Baseline: 3.6%*[210]	2%	2000

Proposed target

Priority populations:Women 15 - 44 years from low socioeconomic groups
Women 15 - 44 who smoke
To reduce the occurrence of neural tube defect in their infants

204 Kramer MS. 1987. Intrauterine growth and gestational duration determinants. *Pediatrics*. 80: 502-511

205 Gould JS, Le Roy S. 1988. Socioeconomic status and low birth weight: A racial comparison. *Pediatrics*. 82: 896-904

206 Binsacca DB, Ellis J, Martin DG, Petitti, DB. 1987. Factors associated with low birthweight in an inner city population: the role of financial problems. *Am J Public Health*. 77(4): 505-6.

207 Lumley J, Correy JF, Newman WM, Curran JT. 1985. Low birthweight in Tasmania 1975-1983: the effect of socioeconomic status. *Aust Paediatr J*. 21:13-14.

208 Stanley F. 1992. Exciting Prospects for Prevention in Perinatal Medicine. Western Australian Research Institute for Child Health. Paper presented at RACP Annual Scientific Meeting, Adelaide, 1992.

209 Stanley, F. 1992. Ibid.

210 MRC Vitamin Research Group. 1991. Paper from Nicholas Wald. Prevention of neural tube defects: Results of the Medical Research Council Vitamin Study. *Lancet*. 338: 131-137.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Perinatal and infant mortality/morbidity, Teenage pregnancies and births	Diet and nutrition, Smoking	Health literacy, Life skills and coping, Self care, Self help, Social support	Schools

b) Established Disability

Need for action

In taking steps to reduce the impact of developmental disability it is clear that comprehensive evaluation of effectiveness must include consideration of both functional gains (for example social, communicating, mobility and adaptive skills) and enhancement of family functions.[211]

Individuals with developmental disability, both children and adults, are often provided with only limited medical and preventive services. They often also have limited access to services.[212] As well, community surveys have shown that the developmentally disabled experience higher than expected rates for chronic illness, problems with polypharmacy, and many have undiagnosed and untreated health problems, including oral health problems.[213] [214]

Building on a foundation of baseline data, which is yet to be obtained, it would be appropriate to develop further goals and strategies in this area.

Goal

To reduce the impact of established disability

Proposed targets

Priority population: All children 0 - 12 years identified as having a developmental disability
To increase the proportion receiving early intervention services in the first year after diagnosis

Priority population: All children 0 - 12 years with established developmental disability
To increase the proportion who are in mainstream schools and who receive adequate support

Priority population: All those with established developmental disability
To increase the proportion with current dental disease who are diagnosed and treated

Priority population: All those with established developmental disability
To increase the proportion with remedial sight or hearing disorders who are appropriately diagnosed and treated

211 Bennett FC & Guralnick MJ. 1991. Effectiveness of developmental intervention in the first five years of life. *The Pediatric Clinics of North America*. pp 1513-1528.

212 Beange H & Bauman A. 1990. Health care for the developmentally disabled. In: Fraser W. Ed. *Key Issues in Mental Retardation Research*. Routledge, London. 154-161.

213 Beange H & Bauman A. 1990. Ibid

214 Scott A. 1992. Personal communication.

Priority population: All those young people and adults 13 years or more with established developmental disability
To reduce the prevalence of obesity and overweight

Priority population: All those young people and adults 13 years more with established developmental disability
To reduce unnecessary use of multiple prescribed medications

Priority population: All carers of children, young people, and adults with established developmental disability
To increase the proportion who receive adequate respite care

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Oral health	Diet and nutrition, Overweight and obesity, Quality use of medicines	Health literacy, Self care, Self help, Social support	Transport, Housing, home and community infrastructure, Work and the workplace, Schools

.13 Oral Health

Need for action

Epidemiological studies reveal that dental decay has been experienced by virtually all Australians, and that inflammation and destruction of the tissues supporting the teeth (periodontal disease) is widespread[215] among adults.

There are many individual consequences of poor oral health, ranging from disruption of function (such as eating and speaking) through to pain or discomfort and effects on work or social activities. As an indication of the social impact of oral disease, there were more than one million days of work lost and over three million days of limited activity associated with oral disease in the Australian population in 1983 (Spencer and Lewis, 1988).[216]

There has been some reduction in the incidence and severity of dental disease in the Australian population as a whole over the past 30 years, and the decline in the extent and severity of dental caries among Australian children has been substantial.

The rate of decline is such that it is likely that the Health for All target set in 1988 of 1.0 DMFT (decayed, missing or filled permanent teeth) among 12 year olds will be easily achieved by the year 2000, and in some areas this target has already been reached.

The evidence shows that the effects of fluoridation of water supplies, the use of fluoride in toothpaste, and the availability of school dental services were significant in the achievement of the improvements in child oral health. The results have also been achieved by educating parents about the importance of dietary and other preventive measures to be utilised from birth.

The distribution of dental caries in children depends on many factors including exposure to fluoride during the period of tooth formation. Children from rural communities, those whose socioeconomic status is low, immigrant and Aboriginal/Torres Strait Islander children tend to experience more caries than their urban, higher socioeconomic status counterparts, and those whose water supplies are fluoridated.

In contrast to the improvements in the oral health of children, dental caries are still widespread in the adult population. On average, people over 45 have at least 20 decayed, missing or filled teeth.[217]

People from disadvantaged backgrounds are significantly more likely to have poor oral health than the general population.[218] Between 15 and 64 years, the lower socioeconomic groups tended to have more untreated dental caries by a considerable margin. Similarly, the lower socioeconomic groups have more missing teeth and fewer fillings.[219]

There are marked differences with age in the prevalence of edentulism, the loss of all natural teeth. In 1987-88, the National Oral Health Survey revealed that while less than 1% of people aged 30 years had lost all natural teeth, more than half of those aged 65 years of more had done so.[220] However, compared to a 1979 survey, there was decline in the prevalence of edentulism in all age groups. The 1987-88 National Oral Health Survey confirmed world-wide trends which indicate that individuals from disadvantaged backgrounds are more likely to have no natural teeth.[221]

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215 National Health Strategy. 1992. *Improving Dental Health in Australia.* Background Paper No 9. National Health Strategy. p 11.

216 National Health Strategy. 1992. Ibid, p 11.

217 National Health Strategy. 1992. Ibid, p 8.

218 National Health Strategy. 1992. Ibid, p 8.

219 National Health Strategy. 1992. Ibid, p 36.

220 Australian Institute of Health. 1990. *Australia's Health 1990.* Australian Government Publishing Service, Canberra. p 25.

221 National Health Strategy. 1992. Ibid, p 33.

Among older people who are homebound or living in institutions, poor oral health leads to severe functional and/or social impairment.

The 1989-90 National Health Survey also showed that low income people are likely to visit the dentist much less often than higher income people, and the 1987-88 National Oral Health Survey indicated that the dental treatment received by low income earners, when they do attend a dentist, is more often of a highly compromised nature, involving the destructive extraction of teeth.[222]

Further improvements in oral health are achievable by extending the availability of fluoridated water supplies, by increasing the proportion of the population who take preventive measures to protect their oral health (use of fluoride toothpaste, dietary measures), and by ensuring access to early intervention by appropriate dental services.

Goal

To reduce morbidity from oral disease

Targets

Priority population: All children 6 years	**level**	**year**
To reduce the proportion who have permanent teeth with caries experience as measured by DMFT index	-50%	2000

Baseline: Australia's Health 1992. Table S41. p 339. (Mean number of teeth) 0.9 DMFT

Priority population: All people 65 years or more	**level**	**year**
To reduce the prevalence of edentulism	38%	2000

Baseline: National Oral Health Survey, 1988-89. In: Australia's Health 1992. 50.2%

Proposed targets

Priority populations: Children 12 years from low socioeconomic groups
Aboriginal/Torres Strait Islander children 12 years
NESB children 12 years
Children 12 years who live in rural communities
To increase the mean index of DMFT to 1.5 or less
Baseline: AIH Dental Statistics and Research Unit, National Oral Health Survey, 1987-88

Priority populations: Young people 18 years
Aboriginals/Torres Strait Islanders 18 years
NESB 18 years
To increase the proportion who have retained all their natural teeth

Priority populations: Young people and adults 15 - 64 years from low socioeconomic groups
To reduce the proportion who have untreated dental caries

Priority populations: Young people and adults 15 - 64 years from low socioeconomic groups
Aboriginal/Torres Strait Islander young people and adults 15 - 64 years
NESB young people and adults 15 - 64 years
To reduce the prevalence of missing teeth

222 National Health Strategy. 1992. Ibid, p 12.

Priority populations: Adults 35 - 64 years from low socioeconomic groups
Aboriginal/Torres Strait Islanders 35 - 64 years
NESB adults 35-64 years
To reduce the prevalence of edentulism

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Developmental disability	Diet and nutrition, Oral hygiene	Health literacy	The physical environment

CHAPTER 2.2

Healthy Lifestyles and Risk Factors

2.1 Diet And Nutrition

a) Food and nutrition

Need for action

Food and nutrition are fundamental determinants of health status. There is evidence that approximately one third of cancers and one quarter of cardiovascular disease are attributable to remediable aspects of the affluent diet.[223] Many diet-related health problems are associated with overconsumption of major nutrients, a paradox which characterises most so-called countries of affluence.[224] Even with the increase in information about nutrition in the last decade, the Australian diet is still high in a range of dietary factors which have been strongly linked to ill health.

There still exist certain population subgroups that appear to be at risk of under-nutrition, generally for a specific nutrient (for example, iron in premenopausal women, and folic acid in pregnant women). Older people may lack specific dietary nutrients, while others, particularly Aboriginals and Torres Strait Islanders in remote communities, lack a secure food supply. Because food is often the sole discretionary item in the budget of low income groups, they can be nutritionally disadvantaged.

There are only limited data on the food intake of immigrants. However, comparing trends in consumption of selected food groups it appears that while the Australian-born are reducing their intakes of many high-fat foods, including meats, butter and high-fat dairy products, the consumption of these foods is on the increase among immigrants, even though for some foods their intakes are still well below the Australian average.[225]

There has been a lack of continuous monitoring of the diet and nutrition of Aboriginal groups in Australia. It is known that Aboriginal adults suffer disproportionately from diseases such as obesity, hypertension, diabetes and cardiovascular disease.[226] Diet is known to play a significant role in the onset and control of each of these conditions.

The basic food supply in Australia is adequate to meet the nutritional needs of Australians, but this does not guarantee a nutritious diet for Australians. In fact the food supply provides more refined fats, sugars, and alcohol than are necessary for a nutritious and healthy diet.[227] The Australian Dietary Guidelines have recently been revised. As part of the process, an extensive review of scientific knowledge about the relation between diet and disease, nutrients available in the Australian food supply, and patterns of morbidity and mortality in Australia has been conducted. The new guidelines recommend eating a variety of nutritious foods, eating plenty of breads, cereals, fruit and vegetables, eating a diet low in fat, particularly low in saturated fat, maintaining a healthy body weight by balancing physical activity and food intake, limiting the intake of alcohol, eating only a moderate amount of sugars, and foods containing added sugars, choosing low salt foods and using salt sparingly, and breastfeeding. Further guidelines recommend eating foods containing calcium (especially important for girls and

223 McMichael AJ. 1991. Food, nutrients, health and disease: a historical perspective on the assessment and management of risks. *Australian Journal of Public Health* 15(1): 7-13.

224 National Food and Nutrition Policy. Draft. 1992. Part 2: The need for a national approach. p 2.

225 Webb K & Manderson L. 1990. Food habits and their influence on health. In: Reid J & Trompf P, Eds. *The Health of Immigrant Australia: A Social Perspective.* Centre for Cross Cultural Studies in Health and Medicine, University of Sydney. Harcourt Brace Jovanovich Publishers, Sydney.

226 Harrison L. Food, nutrition and growth in Aboriginal communities. In: Reid J & Trompf P, Eds. 1991. *The Health of Aboriginal Australia.* Harcourt Brace Jovanovich Publishers, Sydney. p 123.

227 NHMRC. Panel to Review the Dietary Guidelines. 1992. *Dietary Guidelines for Australians. Draft Report.* NHMRC, Canberra. p 5.

women), and eating foods containing iron (especially important for girls, women, vegetarians, and athletes).[228]

Food consumption patterns involve a complex mix of social, cultural, economic, and physiological factors, including the available food supply and its cost. Given that food choice and eating behaviour are intimately associated with culture, a population approach that seeks to modify the diet of the whole community has been viewed as likely to be more effective than working with high-risk individuals. It is considered desirable to shift the population distributions of consumption and of biological risk markers (for example blood cholesterol) to levels that are associated with lower risks of various chronic diseases.[229] Obesity and dental health will also be affected positively by such an approach.

There has been recognition that a combination of strategies will be required in order to protect and develop Australia's food supply, particularly with regard to the need to continue to improve the nutritional quality and cultural diversity of the Australian diet. There is need, too, to ensure that there is sufficient expertise available to conduct toxicological assessments of novel food materials and new food processes. Finally, there is need to ensure that the wider economic and environmental implications of recommendations for change to the food supply are considered.

National Food and Nutrition Policy

In Australia the recently developed National Food and Nutrition Policy acknowledges the need for developing consistent, co-ordinated strategies which influence the food supply, consumer demand for healthy food, and which ensure access to healthy food by all Australians, irrespective of their geographic, social, cultural, or economic circumstances. Following adoption of the Policy, an implementation plan, including strategies, is being developed.

There is evidence that such strategies, when combined, can successfully influence the nutritional status of Australians.

Goal	Targets		
To increase the proportion of the population who consume a diet consistent with the Australian Dietary Guidelines	**Priority population: Adults 25 - 64 years**	**level**	**year**
	To increase the average number of serves of core cereal[230] foods in the diet	+20% (m) +27% (f)	2000 2000
	Baseline: National Dietary Survey of Adults 1983, No.1 Foods Consumed. DOH, 1986: Males average 7.5 serves daily; Females average 7 serves daily		
	Priority population: Adults 25 - 64 years	**level**	**year**
	To increase the percentage who eat vegetables daily	95%	2000
	Baseline: National Dietary Survey of Adults, 1983. No 1 Foods Consumed. DOH, 1986: Males 91.5%, Females 92.5%		
	Priority population: Adults 25 - 64 years	**level**	**year**
	To increase the percentage who eat fruit daily	95%	2000
	Baseline: National Dietary Survey of Adults, 1983. No 1 Foods Consumed. DOH 1986: Males 59%, Females 70%		

228 NHMRC. 1992. Ibid, p 4.

229 McMichael AJ. 1991. Ibid, p 12.

230 Breads (particularly wholegrain), cereals, pasta, rice

Priority population: Young people **10 - 15 years**	**level**	**year**
To increase the average number of serves of core cereal foods in the diet	+20% (m) +18% (f)	2000 2000

Baseline: National Dietary Survey of Schoolchildren (aged 10 - 15 years) 1985. No 1 Foods Consumed. DCSH, 1988: Young men average 7.5 serves daily; Young females average 7 serves

Priority population: Young people **10 - 15 years**	**level**	**year**
To increase the percentage who eat vegetables daily	95%	2000

Baseline: National Dietary Survey of Schoolchildren (aged 10 - 15 years) 1985. No 1 Foods Consumed. DCSH, 1988: Males 83%, Females 84%

Priority population: Young people **10 - 15 years**	**level**	**year**
To increase the percentage who eat fruit daily	95%	2000

Baseline: National Dietary Survey of Schoolchildren (aged 10 - 15 years) 1985. No 1 Foods Consumed. DCSH, 1988: Males 60%, Females 69.5%

Priority population: All adults 18+ years	**level**	**year**
To reduce the average consumption of dietary fat as a proportion of total energy intake	30%	2000

Baseline: ABS. 1992. Apparent Consumption of Foodstuffs and Nutrients 1988-89: 33.7%

Priority population: Adults 25 - 64 years	**level**	**year**
To reduce the percentage whose dietary fat intake is greater than 40% of total energy (including alcohol) intake	15%	2000

Baseline: National Dietary Survey of Adults, 1983. No 2 Nutrient Intakes, DCSH, 1987: 36%

Priority population: Adults 25 - 64 years	**level**	**year**
To reduce the percentage of saturated fat in total energy intake (including alcohol)	13%	2000

Baseline: National Dietary Survey of Adults, 1983. No 2 Nutrient Intakes, DCSH, 1987: 16%

Priority population: Young people **13 - 15 years**	**level**	**year**
To reduce the percentage of saturated fats as a contribution to the total energy intake (including alcohol)	14%	2000

Baseline: National Dietary Survey of Schoolchildren (aged 10 - 15 years) 1985. No 2 Nutrient Intakes, DCSH 1989: 17%

Priority population: The whole population	**level**	**year**
To reduce the average consumption of alcohol in the Australian diet	-20%	2000

Baseline: ABS. 1992. Apparent Consumption of Foodstuffs and Nutrients 1988-89: 20g per day

Priority population: Adults 20 - 69 years who consume alcohol	**level**	**year**
To reduce the percentage whose usual diet includes greater than 5% of total energy from alcohol	5.6% (m) 4.1% (f)	2000 2000

Baseline: National Heart Foundation Risk Factor Prevalence Study. Survey No 3 1989: Males 7.4%, Females 5.5%

Priority population: The whole population	**level**	**year**
To reduce the average consumption of refined sugars (sucrose, syrups, honey) in the Australian diet	-13% [231]	2000

Baseline: ABS. 1992. Apparent Consumption of Foodstuffs and Nutrients 1988-89. 15.3% of energy supply

Priority population: Young people 10-15 years	**level**	**year**
To reduce the percentage eating >15% of energy as refined sugars	20%	2000

Baseline: National Dietary Survey of Schoolchildren (aged 10 - 15 years) 1985. No 2 Nutrient Intakes. DCSH 1989. 30% of children consume 15% or more energy from refined sugars

Priority Population: Adults 20 - 69	**level**	**year**
To reduce the percentage who almost always add salt to food in the home	10% (m) 7% (f)	2000 2000

Baseline: National Heart Foundation Risk Factor Prevalence Study. Survey No 3, 1989: Males 20%, Females 14%

Priority populations:	**level**	**year**
Females 15 years	-50%	2000
Females 20 - 54 years	-50%	2000
To reduce the proportion with iron deficiency		

Baseline: English RM and Bennett SA. 1990. Iron status of Australian Children, Med J Aust, 152:582-586; Women aged 15 years: 9%
AIH/HHCS Iron Status of Australian Adults aged 20 - 69 years, 1991 (unpublished data): Women aged 20 - 54 years: 4.5%

Priority population: The whole population	**level**	**year**
To increase to 1000 mg per person per day the total calcium intake, excluding supplementation, in the Australian diet	+10%	2000

Baseline: ABS. 1992. Apparent Consumption of Nutrients and Foodstuffs 1988-1989: Whole population 904 mg per person per day.

231 This is equivalent to a reduction of 2% total energy of refined sugars, but expressed such that changes in the total energy do not confuse the monitoring of this target.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular mortality/morbidity, Breast cancer, Perinatal and infant mortality/ morbidity, Diabetes, Mental health problems and mental disorders, Musculoskeletal disorders, Osteoporosis, Developmental disability, Oral health	breastfeeding, Overweight and obesity, Physical activity, High blood pressure, Alcohol misuse, Oral hygiene	Health literacy, Social support	Work and the workplace, Schools

b) Breastfeeding

Need for action

In general, the prevalence of breastfeeding at hospital discharge is already high. Recent data from the ABS National Health Survey (1989-90) suggest that 77% of infants are breastfed. The need, now is to increase its duration.

There are, however, large variations in breastfeeding practices between socio-economic groups and migrant groups. The lowest rates of breastfeeding tend to occur among recent immigrants - suggesting that economic and cultural factors play a major role. Of all Australian women, recent immigrants have the highest participation rates in the labour force, including during the years of child-bearing.[232] The limited number of workplaces providing child care facilities in turn limits the ability of many women to breastfeed. There is evidence that women from the highest socioeconomic groups are almost twice as likely to breast-feed for an extended period of time than women from the lowest groups. Access to support networks as well as family, appears to be important in explaining both class and ethnic differences in infant feeding.[233]

Note: A study of the prevalence of breastfeeding in Australia is currently being conducted by C. Binns and Colleagues from Curtin University, Western Australia. It is hoped that data from this study will help refine the targets below.

Goal

To increase the prevalence and duration of breastfeeding

Proposed targets

Priority population: Babies up to 2 months	level	year
To increase the percentage who are breastfed following discharge	90%	2000
Priority population: Babies up to 3 months	**level**	**year**
To increase the percentage who are:		
fully breastfed	60%	2000
partially breastfed	80%	2000
Priority population: Babies up to 6 months	**level**	**year**
To increase the percentage who are:		
fully breastfed	50%	2000
partially breastfed	80%	2000

Baseline: Palmer N. 1985. breastfeeding - the Australian Situation. J.Food Nutr. 42: 13-18.
Hitchcock N and Coy J. 1989. The growth of healthy Australian infants in relation to infant feeding and social group. Medical Journal of Australia. 150: 306-311.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Perinatal and infant mortality/ morbidity	Diet and nutrition	Health literacy, Self help	Work and the workplace

232 Manderson L. 1985. In: Reid J & Trompf P, Eds. *The Health of Immigrant Australia.* Harcourt Brace Jovanovich, Publishers, Sydney. p 158.

233 Manderson L. 1985. Hartmann 1987. In: Reid J & Trompf P, Eds. Ibid, p 175.

2.2 Overweight And Obesity

Need for action

Despite a decade of nutrition education and health promotion, there has been an increase in the proportion of the population that is obese[234] and no decrease in the proportion of overweight Australians. The National Heart Foundation Risk Factor Prevalence Surveys found that the proportion of males 25 to 64 years who were obese had risen from 7.9% in 1983 to 9.6% in 1989, and for women 25 to 64 years, from 9.9% to 11.4%. The 1989 Survey showed increases (since 1983) in the proportions of males and females who were overweight but these were not statistically significant (39.2% to 41.2% for males; 21.2% to 22.6% among females). However, the lack of a downward trend is important.[235] Mean and median estimates of Body Mass Index (BMI = body weight(kg)/height(m^2) increased for both men and women.

Overweight and obesity are associated with increased mortality and/or morbidity from non-insulin dependent diabetes mellitus (NIDDM), coronary heart disease, hypertension, gall bladder disease, and some types of cancers. The higher the BMI the higher the risk for these conditions.[236]

The type of fat distribution in obesity is now thought to have a substantial impact on health risk. An android or central distribution of fat is associated with stroke, hypertension, ischaemic heart disease, and non-insulin dependent diabetes mellitus.[237] This distribution is most common in men when they become obese, while a gynoid or peripheral fat deposition pattern is more common in women when they become obese.[238]

Other complications associated with obesity include the development of arthritis and degenerative joint disease, and high blood pressure.

It appears, from the few studies that are available, that many Aboriginal adults, particularly women, tend to gain weight rapidly in early adulthood. Of further concern is that the women's body fat distribution is of the type which means added risk of diabetes and metabolic complications of obesity.[239]

Genetic factors are important in determining the predisposition to obesity in many people.[240] Much obesity is a result of over-consumption of energy but this is not necessarily associated with the quantity of food consumed. It is often the result of inappropriate food choice and, in fact, obese people's diet may be low in some nutrients. It is well established that obese people need to change permanently what they eat in order to improve their nutrition as well as reducing their energy intake. Reduced energy intake needs to be complemented with increased levels of physical activity.

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234 Note that the categories `overweight' and `obese' are based on the National Heart Foundation risk factor prevalence surveys, and use body mass index levels to categorise individuals; the use of waist-hip ratios (WHRs) has also been considered (*Med J Aust* 1992:156:280-285), but has not been as widely assessed in populations.

235 The 1983 National Heart Foundation Risk Factor Prevalence Survey data on weight and height were re-analysed to permit comparisons with the 1989 National Heart Foundation Risk Factor Prevalence Survey by S. Bennett, Australian Institute of Health and Welfare.

236 NHMRC. Panel to Review the Dietary Guidelines. 1992. *Dietary Guidelines for Australians.* Draft Report NHMRC. p 30.

237 Seidell et al. 1987. Obesity and fat distribution in relation to health: Current insights and recommendations. *World Review of Nutrition and Dietetics.* 50: 57-91.

238 Harrison L. 1991. Food, nutrition and growth. In: Reid J & Trompf P, Eds. *The Health of Aboriginal Australia.* Harcourt Brace Jovanovich Publishers, Sydney. p 153.

239 Harrison L. 1991. Ibid. p 153.

240 Bouchard C, Savard R, Despres JP et al. 1985. Body composition in adopted and biological siblings. *Human Biology.* 57: 61-75.

As well as obesity and overweight, there is increasing concern about the number of young women who develop the eating disorders of anorexia and bulimia. While a recent study of women found that many nominated being overweight as their greatest health concern,[241] in fact, many women who are concerned about being overweight are not overweight at all. The 1989 National Heart Foundation Risk Factor Survey found 29% of women aged 20 - 24 years were underweight according to their BMI.

Goal

To reduce the prevalence of overweight and obesity among adults

Targets

Priority population: Men 20 - 39 years	**level**	**year**
To reduce the proportion who are overweight	29%	1995
	26%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 34.6%

Priority population: Men 40 - 59 years	**level**	**year**
To reduce the proportion who are overweight	40%	1995
	36%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 45.5%

Priority population: Men 60 - 69 years	**level**	**year**
To reduce the proportion who are overweight	44%	1995
	39%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 48.7%

Priority population: Women 20 - 39 years	**level**	**year**
To reduce the proportion who are overweight	14%	1995
	12%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 17.3%

Priority population: Women 40 - 59 years	**level**	**year**
To reduce the proportion who are overweight	25%	1995
	22%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 27.1%

Priority population: Men 20 - 39 years	**level**	**year**
To reduce the proportion who are obese	5%	1995
	4%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 7.9%

Priority population: Men 40 - 59 years	**level**	**year**
To reduce the proportion who are obese	10%	1995
	9%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 13.5%

Priority population: Men 60 - 69 years	**level**	**year**
To reduce the proportion who are obese	9%	1995
	7%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 11.9%

241 Saltman D. 1991. *Women and Health.* Harcourt Brace Jovanovich Publishers, Sydney. p 166.

Priority population: Women 20 - 39 years	**level**	**year**
To reduce the proportion who are obese	5%	1995
	5%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 8%

Priority population: Women 40 - 59 years	**level**	**year**
To reduce the proportion who are obese	11%	1995
	11%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 14.4%

Priority population: Women 60 - 69 years	**level**	**year**
To reduce the proportion who are obese	13%	1995
	11%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 18.0%

Priority population: Women 20 - 24 years	**level**	**year**
To reduce the proportion who are underweight	20%	2000

Baseline: National Heart Foundation. 1989. Risk Factor Prevalence Study. Survey No 3: 29%

Proposed targets

Priority population: People 70 years or more
To reduce the proportion who are overweight or obese

Priority population: Young people 12 - 24 years with a family history of NIDDM
To increase the proportion who maintain their weight within the healthy weight range

Priority population: Adults 18 years or more who are obese
To increase the proportion who eat nutritionally appropriate diets

Priority population: Young people and young adults 12 - 29 years
To reduce the proportion who are overweight and obese

Priority population: Young people and adults 12 - 29 years
To reduce the proportion who have a defined eating disorder

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular disease mortality and morbidity, Diabetes, Mental health problems and disorders	Diet and nutrition, Physical activity, High blood cholesterol, High blood pressure, Alcohol misuse	Health literacy	Work and the workplace, Schools, Housing, home and Community infrastructure

2.2.3 Physical Activity

Need for action

The likely health benefits of regular physical activity are numerous. Recent evidence has suggested that regular, moderate activity has the potential to reduce cardiovascular disease incidence and reduce cardiovascular disease risk factors. This includes lower intensity physical activities such as brisk walking, performed for short periods (5-10 minutes) several times per week.[242] [243] It has also been shown to influence favourably diabetes, to retard osteoporosis, and to improve mood and physical wellbeing.

Older people, the socioeconomically disadvantaged, and women are the three groups least likely to be regularly active.[244] There has been a recent decline in the proportion who are totally sedentary, but the differences by gender, age, and socioeconomic status have persisted.[245]

While most children participate in regular physical activity, the largest decrease in participation occurs as young people leave school. For this reason it is considered important to develop physical activity habits among children,[246] and then to reinforce them throughout adolescence to prevent the decline in physical activity which occurs in later adolescence and early adulthood.

Population strategies to increase physical activity levels have had some success in promoting walking and other moderate forms of activity.[247]

Goal

To increase the proportion of the population who participate in regular physical activity

Targets

Priority population: Men 20-69 years	level	year
To increase the percentage who report any walking for exercise in the last two weeks	70% 75%	1995 2000

Baseline: National Heart Foundation Risk Factor Prevalence Survey, 1989: 52%

Priority population: Men 20-69 years	**level**	**year**
To reduce the percentage of those doing no physical activity at all in the last two weeks	20% 15%	1995 2000

Baseline: National Heart Foundation Risk Factor Prevalence Survey, 1989: 26.5%

Priority population: Women 20-69 years	**level**	**year**
To increase the percentage who report any walking for exercise in the last two weeks	70% 75%	1995 2000

Baseline: National Heart Foundation Risk Factor Prevalence Survey, 1989: 59%

242 de Busk R et al. 1990. Training effects of long versus short bouts of exercise in healthy subjects. *American Journal of Cardiology.* 65: 1010-1013.

243 Blair SN et al. 1989. Physical fitness and all cause mortality. *Journal of American Medical Association.* 262: 2395-2401.

244 Department of the Arts, Sport, the Environment and Territories. 1992. *Pilot Survey of the Fitness of Australians.* Australian Government Publishing Service, Canberra. p 2.

245 Bauman A, Owen N & Rushworth RL. 1990. Trends and socioeconomic determinants of physical activity in Australia. *Community Health Studies* 14: 19-27.

246 Pyke J. 1985. *Australian Health and Fitness Survey (1985) in School Children.* Commonwealth Department of Arts, Sport and Tourism.

247 Booth M, Bauman A, Owen N, Oldenburg B & Magnus P. 1990. *Report on an Evaluation of the NHF Exercise-Promoting Mass Media Campaign.* NHF. Canberra. Unpublished report.

Priority population: Women 20-69 years	level	year
To reduce the percentage of those doing	20%	1995
no physical activity at all in the last two weeks	15%	2000

Baseline: National Heart Foundation Risk Factor Prevalence Survey, 1989: 27.4%

Proposed targets

Priority populations:
Adults 30-69 years from low socioeconomic groups
Adults 70 years or more
To increase the proportion who participate in any physical activity

Priority population: Young people 19 - 24 years
To increase the proportion who maintain levels of childhood physical activity throughout adolescence and early adulthood

Priority population: Children 5-18 years
To increase the proportion who participate in sport or other physical activity at least three times per week

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular mortality and morbidity, Injury, Diabetes, Musculoskeletal disorders, Osteoporosis	Diet and nutrition, Overweight and obesity, High blood cholesterol, High blood pressure, Safety behaviours	Health literacy	Work and the workplace, Schools, Health care settings

2.2.4 High Blood Cholesterol

Need for action

Elevated levels of total blood cholesterol are an important risk factor for heart disease.[248] Between 1980 and 1989[249] (National Heart Foundation Risk Factor Prevalence Surveys) there was a 23% decline in the proportion of women whose total blood cholesterol at a single measurement was greater than 5.5 mmol/L. However, among men the decline was only 9%.

Well-conducted controlled trials of the effects of lowering markedly-high serum cholesterol levels have shown a significant reduction of the incidence of non-fatal myocardial infarction and sudden cardiac death. The impact of cholesterol reductions on all-causes mortality is less clear, and concerns have been raised in several studies and reviews about compensatory increases in deaths from non-medical causes in some trials designed to lower cholesterol.

The potential for improvement in heart health on the basis of dietary meat and dairy fat intake, and total energy load was indicated by the Seven Countries study.[250] These descriptive data remain the most compelling for suggesting that changes in diet may lead to reductions in the coronary disease risk. Serum cholesterol levels can be lowered by up to 20% by decreasing dietary saturated fats from meat and dairy products, adding monounsaturated vegetable oils, decreasing total energy intake, and adding more fresh vegetables to the diet.[251]

A significant reduction in coronary heart disease mortality could be predicted with quite modest changes in total dietary dairy and meat fat intake, were they to apply to the whole population. There is evidence that the total fat content of the Australian diet has been reduced and that the mean serum cholesterol level has fallen, possibly contributing to the remarkable 50% fall in coronary heart disease mortality which has occurred in Australia since 1968.[252]

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248 Note that targets developed here focus on total cholesterol levels; it has been increasingly recognised that lipoprotein subfractions of total cholesterol may contribute to increased risk (LDL) or protection (HDL) against heart disease.

249 Note that for all targets derived from the National Heart Foundation risk factor prevalence surveys, these studies were carried out in capital cities only, and hence, population estimates are truly generalisable only to urban populations. The 1989 National Heart Foundation Risk Factor Prevalence Survey sample included residents of Canberra and Darwin for the first time.

250 Keys A. Ed. 1980. *Seven Countries.* Harvard University Press, Cambridge.

251 Wilson A, Leeder S & Isacsson S. 1990. Health education, health promotion or drugs? Cholesterol and coronary heart disease. *Medical Journal of Australia* 152:561-2.

252 Wilson A, Leeder S & Isacsson S. 1990. Ibid, p 563.

Goal

To reduce the prevalence of high blood cholesterol among the adult population

Targets

Priority population: Men 20-69 years	**level**	**year**
To reduce the percentage whose blood	40%	1995
cholesterol is greater than 5.5 mmol/L	35%	2000

Baseline: National Heart Foundation Risk Factor Prevalence Survey.[253] *1989: 47%*

Priority population: Women 20-69 years	**level**	**year**
To reduce the percentage whose blood	35%	1995
cholesterol is greater than 5.5 mmol/L	30%	2000

Baseline: National Heart Foundation Risk Factor Prevalence Survey. 1989: 39%

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular disease mortality and morbidity	Diet and nutrition, Overweight and obesity, Physical activity, High blood pressure	Health literacy	Work and the workplace, Health care settings

253 Note that for all targets derived from the National Heart Foundation risk factor prevalence surveys, these studies were carried out in capital cities only, and hence, population estimates are truly generalisable only to urban populations. The 1989 National Heart Foundation Risk Factor Prevalence Survey sample included residents of Canberra and Darwin for the first time.

2.2.5 High Blood Pressure

Need for action

High blood pressure is a major risk factor for stroke and coronary heart disease. The National Heart Foundation Risk Factor Prevalence Study in 1989 found that 21% of males aged 20 - 69 years and 11% of females aged 20 - 69 years had diastolic blood pressure greater than 90 mmHg. In both cases these were reductions from the levels found in the 1983 survey. Further reductions, targeting males in particular, would further reduce the risk of stroke and heart disease in the population.

High blood pressure is associated with socioeconomic disadvantage, obesity, and a family history of hypertension. Hypertension among the Aboriginal/Torres Strait Islander populations is probably more than twice as frequent as among non-Aboriginals, a problem compounded by the likelihood of less successful hypertension detection and control.[254]

The causes of hypertension are multifactorial, and include immutable factors (genetic predisposition) as well as a number of modifiable (behavioural) factors. These include weight control, physical activity, and diet (especially reducing excessive salt intake and avoiding alcohol misuse).

Strategies were developed in the 1970s to detect unrecognised high blood pressure in general practice, and its subsequent treatment and control is thought to have been an important contributor to the overall decline in cardiovascular mortality in Australia over the last two decades.

However, the recognition and management of high blood pressure remains an important challenge, particularly among the socioeconomically disadvantaged and the Aboriginal/Torres Strait Islander populations.

Goal

To reduce the prevalence of high blood pressure among the adult population

Targets

Priority population: Men 20-69 years	**level**	**year**
To reduce the percentage whose diastolic blood pressure is greater than 90 mmHg	12%	1995
	5%	2000

Baseline: National Heart Foundation Risk Factor Prevalence Survey. 1989: 21%

Priority population: Women 20-69 years	**level**	**year**
To reduce the percentage whose diastolic blood pressure is greater than 90 mmHg	8%	1995
	5%	2000

Baseline: National Heart Foundation Risk Factor Prevalence Survey. 1989: 11%

Proposed targets

Priority population: Aboriginal/Torres Strait Islander adults 20-69 years
To reduce the proportion whose diastolic blood pressure is greater than 90 mmHg

Priority population: Adults 20-69 from low socioeconomic groups
To reduce the proportion whose diastolic blood pressure is greater than 90 mmHg

Priority population: Adults 69 years or more
To reduce the proportion whose diastolic blood pressure is greater than 90 mmHg

254 Thomson N. 1991. A Review of Aboriginal Health Status. In: Reid J & Trompf P, Eds. *The Health of Aboriginal Australia.* Harcourt Brace Jovanovich Publishers, Sydney. p 74.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular disease mortality and morbidity	Diet and nutrition, Overweight and obesity, Physical activity, High blood cholesterol, Smoking, Quality use of medicines	Health literacy	Work and the workplace, Health care settings

2.2.6 Smoking [255]

Need for action

About 20,000 Australians die from smoking-related causes each year - over 50 deaths a day. Overall, in 1986, smoking contributed to about one in every six deaths, 3% of all hospital episodes, 4% of all hospital bed days, and over 92,000 years of life lost prematurely.[256]

Smoking is widely acknowledged as the single most important modifiable cause of premature death and disability in Australia. It is a major factor in the development of many cancers especially of the lung, cardiovascular disease, and respiratory diseases.[257] Smoking also aggravates conditions such as asthma. Pregnant women who smoke are at increased risk of giving birth to low birthweight babies, while babies and children exposed to cigarette smoke are at greater risk of Sudden Infant Death Syndrome and respiratory illness.

The prevalence of tobacco smoking in Australia is declining for both males and females, although the female rate is declining much more slowly than the male. In their most recent survey of 4,800 adult Australians, Hill, White and Gray[258] reported that 30% of men and 27% of women were current smokers, with 30% of men and 19% of women having quit.

Between 1983 and 1989 the NSW Department of Health found that age-standardised rates of current smoking among 12 to 16 year olds in NSW fell from 22% to 13% among males and from 29% to 17% among females. Much of the decline in prevalence appears to have been attributable to a reduction in the number of students taking up smoking.[259] An Australia-wide survey conducted by the NSW Cancer Council and the Anti Cancer Council of Victoria in 1990 found that more girls than boys were smoking, except at age 16 years when the rates were equal at 26% for weekly smokers. Thus the estimates of smoking prevalence differ, but with about 15% of teenage children smoking, there is no room for complacency.

Virtually all surveys of smoking confirm that the prevalence of smoking among low socioeconomic groups is higher than among those in higher socioeconomic groups. Prevalence rates also vary according to country of origin. These variations need to be taken into account when targeting smoking prevention or cessation programs.

There is some evidence that the prevalence of smoking amongst Aboriginal males and females is significantly higher than among the rest of the population.[260]

The reductions in prevalence of smoking achieved in the past two decades will contribute substantially to the achievement

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255 The National Drug Strategic Plan (NDSP) places due emphasis on alcohol, tobacco, pharmaceuticals and illicit drugs and proposes integrated intersectoral strategies, including law enforcement, for their modulation. For example, the NDSP recognises that consumption of many drugs, including tobacco and many alcoholic drinks, is price sensitive. The NDSP adopts the view that quantitative targets for alcohol, tobacco, pharmaceuticals, and illicit drugs are inappropriate. The NDSP is a strategic plan in which process targets would be appropriate: this document does not propose strategies. The goals above are not offered as a substitute for the NDSP targets, but for consideration beside them. The goals and targets will be understood from the complementary perspective that both documents aim to minimise the harm done to individuals and to the community resulting from the misuse of drugs.

256 Australia. Department of Community Services and Health. 1990. *Tobacco in Australia.* Australian Government Publishing Service, Canberra. p xi.

257 Doll R. 1990. Can we predict disease in the future? In: Durston B & Jamrozik K. Eds. *Tobacco and Health 1990: the Global War.* Proceedings of the Seventh World Conference on Tobacco and Health, 1-5 April, 1990. Perth, Western Australia. Health Department of Western Australia, Perth. p 26.

258 Hill D, White V and Gray N. 1991. Australian patterns of tobacco smoking in 1989. *Medical Journal of Australia.* 154:797-789.

259 Donnelly N, Oldenburg B, Quine S, Macaskill P et al. 1992. Changes in reported drug prevalence among New South Wales secondary school students, 1983 to 1989. *Australian Journal of Public Health* 16(1): 50-57.

260 Brady M. 1991. Drug and Alcohol use among Aboriginal people. In: Reid J & Trompf P, Eds: *The Health of Aboriginal Australia.* Harcourt Brace Jovanovich, Sydney. p 202.

of other targets relating to lung cancer and cardiovascular diseases many years hence. For these reasons they must be maintained. An increased understanding of why some population subgroups smoke more than others is an essential prelude to working with such groups to reduce their risk. In addition, special attention needs to be given to those subgroups where there are negative attitudes toward quitting (people aged over 50 years), people at high risk through other factors of developing cardiovascular disease, women taking oral contraceptives, and among people who wish to quit but have found it impossible.

In recent years the significance of the risk associated with the passive inhalation of secondary tobacco smoke has been increasingly understood. Much action has been taken to rid public places and workplaces, especially restaurants and government buildings, of smoking. The impact of such measures on smoking prevalence has been found to be substantial particularly when employers offer employees education and support to quit smoking.

In March 1991, Australian governments adopted the National Health Policy on Tobacco in Australia to co-ordinate action. The Policy's goal is to improve the health of all Australians by eliminating or reducing their exposure to tobacco in all its forms. The Policy proposes strategies which address marketing, availability, taxation, education, passive smoking, cessation services, and monitoring.

Goal

To eliminate substantially tobacco smoking by reducing the proportion of the population who smoke on a regular basis and increasing the proportion of the population who have never smoked

Targets

Priority population: Males and females aged 16+ years	**level**	**year**
To reduce smoking prevalence	22%	2000

Baseline: Anti Cancer Council of Victoria, National Prevalence Study, 1989: males 30%; females 27%

Priority population: Males 16 years or more from low socioeconomic groups	**level**	**year**
To achieve equal reductions in smoking prevalence in this group and high socioeconomic status males	31%	2000

Baseline: Australian Cancer Society. 1991. National Cancer Prevention Policy. 1986: Low socioeconomic status males 42%; High socioeconomic status males 23%

Priority population: Females 16 years or more from low socioeconomic groups	**level**	**year**
To achieve equal reductions in smoking prevalence in this group and high socioeconomic status females	29%	2000

Baseline: Australian Cancer Society, 1991. National Cancer Prevention Policy. 1986: Low socioeconomic status females 36%; High socioeconomic status females 17%

Priority population: Secondary school students 12 - 16 years	**level**	**year**
To reduce the prevalence of current smoking	22%(m) 24%(f)	2000 2000

Baseline: Hill D, White V, Pain M & Gardner G. 1990. Tobacco and alcohol use among Australian secondary schoolchildren in 1987. Medical Journal of Australia. 152:124-130: 16 year old males 27%; 16 year old females 30%

Priority population: Male and female secondary students 12 - 16 years	**level**	**year**
To increase the percentage who have never smoked	75%(m) 75%(f)	2000 2000

Baseline: Donnelly N, Oldenburg B et al. 1992. Changes in reported drug prevalence among New South Wales secondary school students, 1983 to 1989. Australian Journal of Public Health. 16(1): 50-57. 1989: Males 68%; Females 65%

Priority population: All adults 20 - 69 years who currently smoke	**level**	**year**
To increase the percentage who are taking definite action to stop smoking	15%	2000

Baseline: NHF Community Attitudes Survey 1991: 10.9%

Proposed targets

Priority population:
NESB males 16-69 years
People with asthma
People with cardiovascular disease
To reduce the prevalence of smoking

Priority population: All pregnant women who currently smoke
To substantially reduce the prevalence of smoking during pregnancy and lactation

Priority population: Aboriginal/Torres Strait Islander adults 20-69 years
To reduce the prevalence of smoking

Priority population: Babies and children 0-12 years in the home
To reduce substantially the proportion who are exposed to passive smoke in their homes by encouraging parents to make children's areas smokefree zones

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular mortality/morbidity, Lung cancer, Perinatal and infant morbidity/mortality, Asthma, Diabetes, Osteoporosis, Developmental disability	High blood pressure	Health literacy	The physical environment, Schools, Work and the workplace, Health care settings

.2.7 Alcohol Misuse [261]

Need for action

Alcohol is one of the most widely used drugs in Australia. In 1987 it was estimated to be implicated in about 5.5% of all deaths, 8% of potential years of life lost before age 70, 2% of hospital episodes, 4% of hospital bed days, and 5 to 6% of all newly diagnosed cancers.[262] Alcohol is a contributory factor in two of every five divorces or family separations and in violent crimes in Australia.[263]

As well as its role in road traffic accidents and other injuries, excessive use of alcohol contributes to overweight and obesity, increased blood pressure, and some cancers.[264] Excessive alcohol consumption by pregnant women can lead to mental retardation and congenital abnormalities in their babies.[265]

Australia ranks 15 in the world in terms of absolute alcohol consumption, although there has been a 10% decline in per capita consumption of alcohol over the last decade.[266] Results of surveys of drug use among secondary school students in N.S.W. (1983, 1986, 1989) have shown that the prevalence of alcohol use has declined consistently since 1983. Of concern, however, is the fact that while the percentage of female heavy drinkers has declined, there has been no real change among males.[267]

Among the Aboriginal population, the limited data indicate that the average consumption by those Aboriginals who drink alcohol is generally greater than among the non-Aboriginal population. There is conflicting evidence as to the proportion of the Aboriginal/Torres Strait Islander populations who are abstinent - with some evidence that this is greater than in the non-Aboriginal population.

The National Health and Medical Research Council has recommended that low-risk levels of alcohol consumption are: for males - no more than four standard drinks a day; for females - no more than two standard drinks a day, with two or more alcohol-free days a week for both sexes.[268] These standards recognise that, unlike tobacco smoking, there is a recommended responsible level of consumption for alcohol. Indeed, evidence for a cardioprotective effect of alcohol has been found in several studies.

Overall, the decline in alcohol consumption has been consistent with a decrease in mortality associated with it - largely due to the decline in road accident mortality linked

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261 The National Drug Strategic Plan (NDSP) places due emphasis on alcohol, tobacco, pharmaceuticals and illicit drugs and proposes integrated intersectoral strategies, including law enforcement, for their modulation. For example, the NDSP recognises that consumption of many drugs, including tobacco and many alcoholic drinks, is price sensitive. The NDSP adopts the view that quantitative targets for alcohol, tobacco, pharmaceuticals, and illicit drugs are inappropriate. The NDSP is a strategic plan in which process targets would be appropriate: this document does not propose strategies. The goals above are not offered as a substitute for the NDSP targets, but for consideration beside them. The goals and targets will be understood from the complementary perspective that both documents aim to minimise the harm done to individuals and to the community resulting from the misuse of drugs.

262 Australian Institute of Health. 1990. *Australia's Health 1990.* Australian Government Publishing Service, Canberra. p 71.

263 Hetzel BS. 1987. Alcohol, health and disease. In: Nestel P. Ed. *Diet, Health and Disease in Australia.* Australian Academy of Science. Harper and Row, Sydney.

264 World Health Organization. 1990. *Diet, Nutrition and the Prevention of Chronic Diseases.* Technical Report Series 797. WHO, Geneva.

265 National Health and Medical Research Council. Panel to Review the Dietary Guidelines. 1992. *Dietary Guidelines for Australians.* Draft Report. NH&MRC, Canberra. p 40.

266 Australia. Commonwealth Department of Community Services and Health. 1990. *Statistics on Drug Abuse in Australia, 1989.* Australian Government Publishing Service, Canberra. p 15.

267 Donnelly N, Oldenburg B, Quine S et al. 1992. Changes in reported drug prevalence among New South Wales secondary school students, 1983 to 1989. *Australian Journal of Public Health* 16(1): 50-57.

268 NHMRC. 1991. *Is there a safe level of daily consumption of alcohol for men and women? Recommendations regarding responsible drinking behaviour.* 2nd Edition. Australian Government Publishing Service, Canberra.

to changing patterns of alcohol intake, but also attributable to a reduction in cirrhosis. A number of strategies have been shown to succeed in reducing alcohol consumption and the direct and indirect effects of overconsumption. Price, limitations on access, public education, and random breath testing have all been shown to influence alcohol consumption patterns. There are also Aboriginal community initiatives which have reduced alcohol misuse and its effects.

The National Health Policy on Alcohol in Australia, adopted by Australian governments in March 1989, proposes comprehensive programs that address education, controls, treatment, legal, and research initiatives to minimise alcohol related-harm.

Goal

To minimise the harm associated with the use of alcohol

Targets

Priority population: Males and females 15 years or more	**level**	**year**
To reduce per capita consumption of alcohol (and thereby reduce the prevalence of drinking among adults that exceeds the recommended low risk levels of consumption)	-10%	2000

Baseline: Commonwealth Department of Health, Housing and Community Services 1992: 1991 10.1 litres per person aged 15 years and over

Priority population: Male drinkers	**level**	**year**
To reduce the proportion drinking regularly at hazardous or harmful levels	35%	2000

Baseline: (NCADA Household Survey) 1991: 44% of male drinkers drank more than 4 drinks at least one day a week over the past twelve months*

Priority population: Female drinkers	**level**	**year**
To reduce the proportion drinking regularly at hazardous or harmful levels	24%	2000

Baseline: (NCADA Household Survey) 1991: 30% of female drinkers drank more than 2 drinks at least one day a week over the past 12 months*

** drinkers - persons who consumed alcohol in the past year*

Priority population: Male drinkers	**level**	**year**
To reduce the proportion who, when they drink, do so at hazardous or harmful levels	21%	2000

*Baseline: (NCADA Household Survey) 1991: 26% of male drinkers** when they drink usually consume more than 4 drinks*

Priority population: Female drinkers	**level**	**year**
To reduce the proportion who, when they drink, do so at hazardous or harmful levels	26%	2000

*Baseline: (NCADA Household Survey) 1991: 32% of female drinkers** when they drink, usually consume more than 2 drinks*

*** Persons who had tried alcohol in past 12 months*

(Source: National Campaign Against Drug Abuse. Draft Strategic Plan, 1992)

Priority population: Males and females 12-17 years	level	year
To reduce the percentage of drinkers who drink more than 5 drinks in a row at least once in the previous fortnight	20% (m) 10% (f)	2000 2000

Baseline: Donnelly N, Oldenburg B et al. 1992. Changes in reported drug use prevalence among New South Wales secondary school students, 1983 to 1989. Australian Journal of Public Health. 16(1): 50 - 57. 1989: Males (age standardised) 26%; Females (age standardised) 15%

Priority population: All motor vehicle drivers	level	year
To reduce the proportion of randomly breath tested drivers whose blood alcohol levels exceed .05 g/dL	-20%	2000

Baseline: National Campaign Against Drug Abuse. Draft Strategic Plan 1992. Victorian Data: 0.18% of randomly breath tested drivers had a BAC in excess of 0.05 g/dL

Priority population: Males 17-59 years	level	year
To reduce the incidence of alcohol-related road accident fatalities amongst drivers, motorcyclists and pedestrians	-30%	2000

Baseline: National Injury Surveillance Unit. 1992. Unpublished analysis of Federal Office of Road Safety `Fatal File 1988': Crude annual rate: 4.6 per 100,000

Proposed targets

Priority population: Aboriginal/Torres Strait Islander young people and adults 16 years or more
To reduce the proportion of drinkers who drink regularly at hazardous or harmful levels

Priority population: Aboriginal/Torres Strait Islander young people and adults 16 years or more
To reduce the proportion of drinkers who, when they drink, do so at hazardous or harmful levels

Priority population: Pregnant women
To reduce the proportion who consume alcohol during pregnancy, particularly at hazardous or harmful levels

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury, Perinatal and infant mortality/ morbidity, Mental health problems and disorders, Osteoporosis	Diet and nutrition, Obesity and overweight, Safety behaviours	Health literacy	Schools, Work and the workplace, Health care settings

2.2.8 Illicit Drug Use[269]

Need for action

The health, social and economic costs of illicit drug use in Australia are a cause for continuing community concern. There are obvious difficulties in obtaining accurate figures on the extent of illicit drug use in Australia. Three national surveys conducted by the National Campaign Against Drug Abuse (NCADA) in 1985, 1988, and 1991 investigated the frequency with which people had tried a range of drugs.

A greater proportion of males used drugs than females, particularly males aged 20 - 39 years. In general, the proportion of the population who had tried drugs was lower in 1988 than in 1985.

A survey of street youth in 1991 showed that 98% had used drugs illicitly within the previous year[270] compared with 26% of 14 - 19 year olds living at home. Furthermore, a much higher proportion of street youth had used narcotics or hallucinogens in the past 12 months (90% street youth, 10% of 14-19 year olds at home). Reducing use among street youth and unemployed youth will require particular attention. In addition, those who continue to inject drugs are at far greater risk of hepatitis B, hepatitis C, and HIV/AIDS infection.

Goals

To reduce the harm associated with the use of illicit drugs

To reduce the prevalence of illicit substance abuse

Targets

Priority population: Young people

14-19 years	**level**	**year**
To reduce the proportion who have used illicit drugs in the past 12 months	25%	2000

Baseline: NCADA National Household Survey. Porritt D. 1991: 14-19 year olds 26% for all illicit drugs; 10% for hard drugs

Priority population: Street youth

14-19 years	**level**	**year**
To reduce the proportion who have used illicit drugs in the past 12 months	92%	2000

Baseline: NCADA National Household Survey. Porritt D. 1991: Street youth (Sydney sample) 98% for all illicit drugs; 90% for hard drugs

Priority population: Young people

14-19 years	**level**	**year**
To reduce the proportion who have ever tried illicit drugs	34%	2000

Baseline: NCADA National Household Survey. Porritt D. 1991. 14-19 year olds who had ever tried illicit drugs 36%; ever tried hard drugs 16%

269 The National Drug Strategic Plan (NDSP) places due emphasis on alcohol, tobacco, pharmaceuticals and illicit drugs and proposes integrated intersectoral strategies, including law enforcement, for their modulation. For example, the NDSP recognises that consumption of many drugs, including tobacco and many alcoholic drinks, is price sensitive. The NDSP adopts the view that quantitative targets for alcohol, tobacco, pharmaceuticals, and illicit drugs are inappropriate. The NDSP is a strategic plan in which process targets would be appropriate: this document does not propose strategies. The goals above are not offered as a substitute for the NDSP targets, but for consideration beside them. The goals and targets will be understood from the complementary perspective that both documents aim to minimise the harm done to individuals and to the community resulting from the misuse of drugs.

270 Porritt D. 1991. NCADA Survey of Drug Use Among Street Kids. In: NCADA. 1992. *Draft Strategic Plan.*

Proposed targets

Priority population: Injecting drug users
To increase the proportion of continuing drugs users who inject safely

Priority population: Injecting drug users
To increase the proportion who participate in needle and syringe exchange programs

Priority population: Injecting drug users
To increase the number enrolled in methadone maintenance programs

Priority population: Injecting drug users[271]
To increase the proportion who are retained in methadone maintenance programs

Priority population: Injecting drug users
To increase the rate of hepatitis B immunisation

Priority population: Injecting drug users
To decrease the rate of drug poisoning and overdose

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Communicable diseases, HIV/AIDS, Sexually transmitted diseases, Mental health problems and disorders	Healthy sexuality, Immunisation	Health literacy, Life skills and coping	Housing, home, and community infrastructure, Work and the workplace

271 Caplehorn RM & Bell J. 1991. Methadone dosage and retention of patients in maintenance treatment. *Medical Journal of Australia. 154:195-199*

2.2.9 Quality Use Of Medicines[272]

Need for action

Modern medicines have transformed the treatment and prevention of many diseases and have played a part in the increasing life-expectancy and improved health of Australians of all ages.

However, medicines can also cause harm. There is concern about the health, social, and economic costs associated with the inappropriate use of medicines, including **overuse, underuse,** and **misuse**. Several categories of medicines are commonly overused including antibiotics and non-steroidal anti-inflammatory agents. A recent Australian study found that an estimated 30,000 hospital admissions per year were the result of inappropriate drug use.[273] The National Health Survey 1989-90 has estimated that 330,000 Australians were using benzodiazepines daily for six months or more. The survey confirmed that the major groups using benzodiazepines were women and older people. With the use of benzodiazepines for this duration, between 33% and 44% of patients will experience withdrawal after cessation of medication.[274]

Surveys of the prescribing of anti-asthma agents have revealed high use of bronchodilators and a low use of preventive agents, such as disodium cromoglycate and beclomethasone. Recent Australian studies of children with frequent asthma indicate that half are not receiving preventive treatment and that 11% were using no treatment at all.[275] The National Heart Foundation Risk Factor Survey, 1989, found a significant number of people with hypertension who were receiving no treatment.

The challenge is to find ways of optimising the power of medicines to do good while minimising their adverse potential.

A National Policy on the Quality Use of Medicines,[276] published in 1992, expressed its goal as follows:

Recognising that many people maintain health without medicines and further recognising that medicines play a very important role in curing disease, preventing illness and maintaining health, the goal of this policy is to optimise medicinal drug use (both prescription and over-the-counter) to improve health outcomes for all Australians.[277]

A comprehensive, national program has been developed to promote the quality use of medicines among the whole population. The quality with which medicines are used is influenced by the decisions and actions of

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272 DEFINITION OF QUALITY USE OF MEDICINES. Drugs are often required for prevention, control and treatment of illness. When a drug is required, the 'rational use of drugs demands that the appropriate drug be prescribed, that it be available at the right time at a price people can afford, that it be dispensed correctly, and that it be taken in the right dose at the right intervals and for the right length of time. The appropriate drug must be effective, and of acceptable quality and safety... The formulation and implementation by governments of a national drug policy are fundamental to ensure rational drug use.' World Health Organization, 1987. In: Commonwealth Department of Health, Housing and Community Services. *A policy on the Quality Use of Medicines.* Prepared in conjunction with The Pharmaceutical Health and the Rational Use of Medicines (PHARM) Working Party. 1992. p.10.

273 Larmour I, Dolphin R et al. 1991. A prospective study of hospital admissions due to drug reactions. *Australian Journal of Hospital Pharmacy.* 23(2): 90 - 95.

274 Tyrer P. 1990. Dependence as a limiting factor in the clinical use of minor tranquillisers. Psychotropic Drugs of Abuse. *International Encyclopaedia of Pharmacology and Therapeutics.* Chapter 7. New York.

275 Bauman A et al. 1992. Asthma morbidity in Australia: an epidemiological study. *Medical Journal of Australia.* 156: 827.

276 Commonwealth Department of Health, Housing and Community Services. 1992. *A Policy on the Quality Use of Medicines.* Prepared in conjunction with The Pharmaceutical Health and the Rational Use of Medicines (PHARM) Working Party

277 Commonwealth Department of Health, Housing & Community Services. 1992. Ibid, p 10.

many players. A partnership is required among consumers (including the carers of children, the aged and disabled), health professionals (especially doctors, nurses and pharmacists), government, and industry, to improve the quality use of medicines in Australia.

Goal

To increase the quality use of medicines in Australia

Targets

Priority population: The whole population	**level**	**year**
To reduce hospital admissions due to the inappropriate use of medication	-10%	2000

Baseline: Larmour I, Dolphin R et al. 1991. A prospective study of hospital admissions due to drug reactions. Australian Journal of Hospital Pharmacy. 21(2): 90-95: Estimated at 30,000 per year

Priority population: All adults 20 - 69 years with hypertension	**level**	**year**
To decrease the proportion with untreated hypertension	42%(m)	2000
	21%(f)	2000

Baseline: National Heart Foundation, Risk Factor Prevalence Study, Canberra, 1989 : 47% of men and 23% of women with raised blood pressure were untreated and uncontrolled

Priority population: All females 0 - 75+ years	**level**	**year**
To reduce the proportion who use tranquillisers or sedatives towards that of males	22%	2000

Baseline: ABS. 1991. National Health Survey 1989-90: Males 17%; Females 27.3%

Priority population: Young people 16 - 17 years	**level**	**year**
To reduce the proportion who use prescribed drugs for non-health reasons	25%	2000

Baseline: Health Department of Victoria. 1990. 1989 Survey of Alcohol, Tobacco and Other Drug Use Among Victorian Secondary School Students: Of Year 11 students who use sedatives and sleeping tablets, 35% use them for non-health reasons

Proposed targets

Priority populations: The whole population
To increase the proportion who use medication appropriately[278]

Priority population: All adults 65 years or more
To increase the proportion who use medication appropriately

278 Optimal use of medicines (both prescription and over-the-counter) involves:

* judicious selection of management options - defining the role of drugs and non-drug alternatives in treating illness and maintaining health;

* appropriate choice of medicine and dosage regimens - choosing the most effective drug/s for the individual concerned taking into account their clinical condition, risk, benefit, dosage, length of treatment, cost, appropriate monitoring etc; and

* safe use - minimising misuse, over-use, under-use, the ability to take appropriate actions to solve medication-related problems, for example, adverse effects and management of multiple medications. In: Department of Health Housing and Community Services. 1992. Ibid p 4.

Priority populations:
All women 20 - 69 years who are regular benzodiazepine users
All older people 70 years or more who are regular benzodiazepine users
To decrease the proportion regularly using benzodiazepines

Priority population: All adults 65 years or more
To reduce the number of hospital admissions resulting from inappropriate use including therapeutic poisoning

Priority population: People with asthma
To increase proportion who use preventive agents for asthma as prescribed

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular morbidity/mortality, Injury (especially suicide and self inflicted injury, falls among older people), Asthma, Diabetes, Mental health problems and disorders, Sight disorders, Developmental disability	High blood pressure	Health literacy, Life skills and coping	

2.10 Healthy Sexuality

Need for action

Safe sexual practice is part of healthy sexuality which in turn is an important aspect of life for most people. On the other hand, sexual difficulties are often associated with problems in relationships, marital dysfunction, and violent behaviour.

The wider availability and use of contraception has freed sexuality from reproduction, bringing greater acceptance of the contribution of a healthy sexual life to life satisfaction. Developments in male contraception are now beginning to have some impact, whereas in the past contraception has been seen as a woman's responsibility. Work continues on the refinement of contraceptive methods as at present all have some disadvantages or unwanted side-effects. However, greater sexual freedom means that other problems can arise - unintended pregnancies and sexually transmitted diseases being two obvious ones.

There has also been increasing recognition that a satisfying sexual life has been at least implicitly denied to some groups because of lack of knowledge, social constraints, and prejudices. These groups include the handicapped and disabled, those with HIV, those of gay or lesbian sexual preference, and some older people especially those in institutions.

Healthy sexuality includes the ability to enjoy and express sexuality without guilt or shame in fulfilling relationships, the ability to control fertility, and the ability to avoid disorders which damage health and sexual or reproductive function.[279]

Healthy sexuality may well depend in future on the development of stronger negotiating skills for women, and encompasses health promotion and education for the preservation of fertility among women. While reproductive technologies have attracted wide interest and financial support, investment in the prevention of the sexually-transmitted problems that are often the antecedent of the forms of infertility requiring such interventions, has been poor by comparison.

The goal and targets in this part of the report focus on the issue of safe sex, a form of behaviour which is more likely to occur within the context of strong self esteem. For gay men and lesbians, acceptance of their sexuality is fundamental to strengthening their self esteem. Low self esteem has been found to be common among teenagers who become pregnant, and unintended pregnancy cannot be fully explained by a lack of knowldege of contraception alone. There is some research that has examined the relation of self esteem to HIV status. Healthy sexuality for people with HIV includes the prevention of further transmission, as well as avoidance of secondary infection with other sexually transmitted diseases.

279 Health Promotion Authority for Wales. 1990. *Health for All in Wales: Health Promotion Challenges for the 1990s.* Health Promotion Authority for Wales, Cardiff. p 26.

Goals	Proposed targets
To improve health and wellbeing by the expression of safe and healthy sexuality	**Priority populations:** **Sexually active women** **All sexually active young and adult men** To increase the proportion who use effective methods of contraception
To improve the sexual health of those who are sexually active	**Priority populations:** **Sexually active men with multiple partners or whose partner has more than one sexual partner** **Sexually active women with multiple partners or whose partner has more than one sexual partner** To increase the proportion who always use condoms or other safe sexual practices **Priority population: Sexually active people with HIV** To increase the proportion who always practice safe sex

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Teenage pregnancies and births, Sexually transmitted diseases, HIV/AIDS	Illicit drug use, Reproductive health	Health literacy, Life skills and coping	

2.11 Reproductive Health

a) Contraception and Family Planning

Need for action

The wider availability and use of contraception has allowed the separation of sexuality and reproduction. Effective contraceptive methods have enabled people to limit their family size and to space their pregnancies in order to maximise the health of mother and child. It has also led to reduced rates of unintended pregnancy, particularly among young women.

However, despite the widespread adoption of the more effective methods of contraception by Australian women, there is evidence that among some groups, access to, and use of, effective contraception is still problematic. At age 16 years, 47% of Australians have engaged in sexual intercourse. At age 19 years, this has increased to 88%.[280] Less than 25% of couples use contraception at first intercourse, exposing them to risks of unintended pregnancy and sexually transmitted diseases including HIV/AIDS. In Sweden, by comparison, over 80% use contraception in their first sexual (intercourse) encounter.

Patterns of contraceptive use show that teenagers use traditional and over-the-counter methods such as condoms, withdrawal, and rhythm methods. Many teenagers have insufficient or inaccurate information on contraceptive methods and their use, and/or use contraception incorrectly, thus increasing their risk of unintended pregnancy. Abortion rates are highest among girls aged less than 16 years.[281] Births to teenagers can have immediate and long-term health consequences for both the mother and child. However, the effects of unintended pregnancy on women's health at all ages include psychological and physical stress and, in many cases, can result in economic hardship.

Goal	Proposed targets
To increase the proportion of sexually active women and men who regularly use effective contraception	Priority populations: Sexually active young women and men Rural and isolated, sexually active women and men Sexually active Aboriginal/Torres Strait Islander women and men To increase the proportion who regularly use effective contraception

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Abortion, Sexually transmitted diseases, Teenage pregnancies and birth		Health literacy, Social support	

280 Goldman J and Goldman R. 1988. *Show Me Yours: Understanding Children's Sexuality.* Penguin Books, Australia. p 206.

281 Siedlecky S. 1986. Current usage of and attitudes towards contraception in Australia. *Healthright.* 6(1): 7-16.

b) Infertility [282]

Need for action

The rate of infertility among the Australian population appears to be increasing. Among men, recent research has shown that sperm count and seminal volume have decreased significantly over the last 50 years.[283] While the causes of lower sperm quality, and apparent increases in infertility among both women and men are not well understood, it is likely that the increased incidence of sexually transmitted diseases, particularly chlamydia and pelvic inflammatory disease, are also major contributors. It is therefore likely that a significant proportion of infertility is preventable.

Infertility is not only a medical problem, it is also an important social issue. The emotional consequences of infertility are considerable and there is little evidence of loss and grief counselling being provided to those who are infertile.

Infertility treatments, particularly IVF and GIFT, currently have a very high profile in Australia. Many women and couples who are experiencing difficulty in conceiving may feel obliged to undergo high tech infertility treatment often without fully understanding the personal and financial costs. These treatments are expensive to provide, can be painful and stressful for participants, and have limited success when measured in terms of births of live, full term, healthy infants. The side effects of treatment are unknown and possibly considerable, particularly in relation to superovulatory drugs.

There is unequal access to infertility treatments, with most women participating coming from the highest socioeconomic groups.[284]

There is also concern at the health costs that are associated with high technology treatments such as IVF and GIFT, including multiple births, pre-term and low birthweight babies, pre-natal deaths, major congenital malformations, ectopic pregnancies, and increased birth complications and interventions including caesareans.[285]

Steps should be taken to establish a national register of women who have entered into high technology infertility treatments, to measure success rates, and effects on the health of the mother and resultant children.

Goal	Proposed targets
To reduce the infertility rate	**Priority population: Women and men of child-bearing age or younger** To reduce the proportion who are exposed to environmental conditions[286] likely to increase their risk of infertility
To reduce distress and morbidity associated with infertility	**Priority population: Women and men of child-bearing age who are infertile** To increase the proportion who receive advice and/or assistance in coping with loss and grief
	Priority population: Women and men of child-bearing age who are infertile To reduce morbidity associated with infertility treatment

282 This part has been included in this chapter on the advice of the AHMAC Subcommittee on Women and Health.

283 Carlsen E, Giwereman A, Keiding N & Skakkebaek N. 1992. Evidence for decreasing quality of semen during past 50 years. *British Medical Journal.*: 305: 609-13.

284 Webb S. 1988. *Invitro Fertilisation and Related Procedures in Western Australia 1983 - 1987, Report to the Scientific Subcommittee of the Invitro Fertilisation Ethics Committee of Western Australia*, Health Department, WA.

285 Australian Institute of Health and Welfare National Perinatal Statistics Unit. 1991. *Assisted Conception, Australia and New Zealand 1989.*

286 e.g.. Low dose radiation, chemical exposure at work.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Testicular cancer, Sexually transmitted diseases, Maternal mortality and morbidity, Mental health problems and disorders	Healthy sexuality	Health literacy, Life skills and coping, Self help, Social support	Work and the workplace

2.2.12 Sun Protection

Need for action

Skin cancer is the most common cancer in Australia and the rates are among the highest in the world. Exposure to the ultraviolet radiation (UVR) component of sunlight is the major risk factor for skin cancer. Australian-born people are more than twice as likely to develop skin cancer than people who emigrated from the United Kingdom as adults, suggesting that reducing childhood exposure to sunlight is important in the prevention of skin cancer. It is thought that reducing lifetime UVR exposure is necessary to reduce rates of skin cancer in the population.

The incidence of the most serious type of skin cancer, melanoma, in Australia, is the highest in the world and shows a geographical distribution, with rates highest in fair-skinned northern Australians.

Within the population there are subgroups of people who are at a high risk of developing skin cancer. These include people who only burn and never tan in response to sunlight exposure; who have large numbers of acquired melanocytic naevi and freckles; who have dysplastic naevi, particularly if associated with a family history of melanoma; who have solar keratosis; and who were born in Australia, particularly if they have one or more of the above characteristics.[287]

A complex set of sun protection and sun avoidance behaviours is required to prevent skin cancer.

Reducing total lifetime exposure to UVR and minimising the harm caused by sunlight through the use of skin protection are two important approaches to reducing the incidence. Avoiding solar exposure between 11 am and 3 pm, especially in the summer months and wearing hats and shirts with sleeves are two widely recommended ways of reducing exposure to UVR, while the use of sunscreens (sun protection factor 15+) has also been widely promoted.

Early detection via skin examination is a further useful strategy. A recent Australian study of more than 3,500 randomly selected adults aged 16 years or more, showed that 47% of respondents had examined their skin at least once during the preceding year.[288]

Goal

To reduce exposure to sunlight and minimise harm associated with exposure to sunlight

Target

Priority population: People 14 - 69 years	**level**	**year**
To reduce the percentage who reported any sunburn on the previous weekend	10%	1995

Baseline: Hill D, Theobald T, Borland R, White V & Marks R. Summer activities, sunburn, sun-related attitudes and precautions against skin cancer. A Survey of Melbourne residents in the summer of 1987-88: 16%

Proposed targets

Priority population: The whole population[289]

To increase the proportion who avoid the sun between 11 am and 3 pm

287 Marks R. 1991. Prevention of skin cancer. In: Australian Cancer Society. *National Cancer Prevention Policy.* Australian Cancer Society, Sydney. p 37.

288 Hill D, White V, Borland R & Cockburn J. 1991. Cancer-beliefs and behaviours in Australia. *Australian Journal of Public Health.* 15(1): 14-23.

289 Additional sun protection and sun avoidance targets should be established for school age children.

Priority population: The whole population
To increase the proportion who wear hats and long sleeved garments to reduce their solar exposure

Priority population: The whole population
To increase the proportion who use factor 15+ sunscreen whenever they are exposed to sunlight
Baseline: ABS National Health Survey 1989/90. 1991: Factor 15+ sunscreen use 44%[290]

Priority population: All children 0 - 12 years
To reduce UVR exposure

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Skin cancer		Health literacy	Schools, Work and the workplace

290 Note that the effectiveness of sunscreens remains equivocal, unless accompanied by other protective behaviours, and baselines for other sun-protection behaviours are being collected in a variety of current research initiatives

2.2.13 Oral Hygiene

Need for action

Good oral health has important effects on people's functional ability, including both their ability to eat a variety of foods, their communication with others, and their self esteem. Patterns of eating and frequency of food consumption are important factors in achieving good oral health.

A balanced diet during the period of dental development (birth to 18 years) is necessary and a continuous intake of fluoride is essential for the formation of teeth that have a high resistance to dental caries. The effects of fermentable sugars, mainly sucrose, may be minimised by decreasing the frequency of intake and restriction of in-between-meal eating of sugar or foods containing sugar.

The practice of good oral hygiene is universally accepted as having an important role in the prevention of dental disease by the removal of plaque and other deposits which accumulate on the teeth and play a major role in causing both dental caries and periodontal disease.

The most effective way of improving oral health is through fluoridation. The introduction of fluoridation to much of the water supply in Australia, along with increased community awareness and the preventive and educative aspects of school dental services,[291] have contributed to a substantial decline in the extent and severity of dental decay among Australian children over the last 20 years.

However, this must be combined with effective daily brushing, appropriate eating patterns, and regular access to professional dental services in order to lead to the maintenance of good oral health and the prevention of gum disease and tooth decay.

The review team has not been able to identify any baseline data in order to set targets regarding the prevalence of effective daily brushing or appropriate eating patterns.

The plaque index (developed by Loe & Silness[292]) has been shown to be a useful indicator of good oral hygiene although the limited Australian population data[293] are not sufficient as a baseline measure for setting targets. Proposed targets have been suggested.

Goal	Proposed targets
To improve oral hygiene among children and adults	**Priority populations:** **All children and adults 5 years or more** **All Aboriginal/Torres Strait Islander children and adults 5 years or more** **All NESB children and adults 5 years or more** To increase the proportion who brush their teeth daily (using an effective technique) with fluoride toothpaste **Priority Population: All children and young people 5 - 18 years who do not have access to fluoridated water** To increase the proportion who rinse their teeth daily with fluoridated mouth rinse **Priority population: The whole population** To reduce the proportion whose plaque index[294] reading is greater than 2

291 Grant C & Lapsley H. 1992. *The Australian Health Care System 1991.* School of Health Services Management, University of New South Wales, Sydney.

292 Loe H & Silness J. 1965. Periodontal disease in Pregnancy. II. Correlation between oral hygiene and periodontal conditions. *Acta Odont Scand.* 22: 121-135.

293 Calache H. 1990. *The Impact of a Dental Health Education Program on the Knowledge, Attitudes and Behaviour of Primary School Children (Year 6) and their Parents.* Dental Health Services (Victoria), Melbourne.

294 Loe H & Silness J. 1965. Ibid.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Oral health	Diet and nutrition	Health literacy	

2.2.14 Safety Behaviours

Need for action

While environmental factors can play a critical role in the prevention of injury, disability, and premature death, personal behaviours are also relevant. Although the data are limited, there is evidence that the wearing of seat belts in cars,[295] and the wearing of safety helmets by cyclists, have contributed to reduction in injury and death.[296] [297] The use of eye protection by workers and sports participants has been widely accepted as a plausible means to reduce injuries, although few formal intervention studies have been conducted. Research continues to design more effective eye-protection devices (as assessed by strength, ability to resist relevant intrusions and cost), to identify the most effective means to ensure people use them, and to monitor the size of the problem of work-related and sport-related eye injury.

The relationship of driver and/or pedestrian behaviours such as alcohol consumption or driving at excessive speed to injury and death in road accidents has been well established.

Environmental measures designed to reduce road injury and death are included in other parts of this report.

Goal

To increase the proportion of the population who take appropriate action to ensure their own safety and that of others

Targets

Priority population: All secondary school bicyclists	**level**	**year**
To increase the proportion wearing	75%	1995
bicycle helmets to, from, and in association,	90%	2000
with school activities		

Baseline: RTA, NSW, estimated from VICROADS (Morgan, Perberdy and Rogerson, 1991) and RTA, NSW, (Walker, 1992): 1991 Approximately 65%

Priority population: All bicyclists aged less than 16 years	**level**	**year**
To increase the proportion wearing	80%	1995
appropriate helmets	95%	2000

Baseline: RTA, NSW, estimated from VICROADS (Morgan, Perberdy and Rogerson, 1991) and RTA, NSW, (Walker, 1992): 1991 Approximately 75%

Priority population: All adult bicyclists 18 years or more	**level**	**year**
To increase the proportion wearing	85%	1995
appropriate helmets	90%	2000

Baseline: RTA, NSW, estimated from VICROADS (Morgan, Perberdy and Rogerson, 1991) and RTA, NSW, (Walker, 1992): 1991 Approximately 80%

295 Fildes BN, Lane JC, Lenard J, Vulcan AP. 1991. *Passenger Cars and Occupant Protection.* Federal Office of Road Safety, Department of Transport and Communication, Canberra. (Report CR95).

296 Thompson RS, Rivara FP, Thompson DC. 1989. A case-control study of the effectiveness of bicycle safety helmets. *New England Journal of Medicine.* 320: 1361-1367.

297 Vulcan AP, Cameron MH, Watson WL. 1992. Mandatory bicycle helmet use: experience in Victoria, Australia. *World Journal of Surgery.* 16: 389-397.

Priority population: All drivers	**level**	**year**
To reduce the proportion who drive motor vehicles at excessive speed in urban areas	5%	2000

Baseline: RTA NSW data 1991: 11%

Priority population: Children 0-14 years who are passengers in cars and light commercial vehicles	**level**	**year**
To increase the proportion properly secured by appropriate restraints in cars and light commercial vehicles	90%	1995
	95%	2000

Baseline: 88% of children properly restrained (RTA, NSW, Analysis of reported data from NSW, VIC, QLD, WA 1992)

Priority population: Adults 15 years or more who are occupants of cars and light commercial vehicles	**level**	**year**
To increase the proportion of occupants properly secured by appropriate restraints	98%	2000

Baseline: 94% properly restrained. (RTA, NSW. Analysis of reported data from NSW, VIC, QLD, WA 1992)

Proposed targets

Priority population: Players of squash, racquetball and badminton
To increase the proportion who wear eye protection during play

Priority population: Participants in contact sports and hockey
To increase the proportion who wear mouthguards during play

Priority population: Cricket players
To increase the proportion who wear helmets during play

Priority population: Horse riders
To increase the proportion who wear approved equestrian helmets while riding

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury, Sight disorders, Hearing disorders	Physical activity, Alcohol misuse	Health literacy, Safety skills and first aid	Transport, Housing, home and community infrastructure, Work and the workplace, Schools

2.2.15 Immunisation

Need for action

Childhood immunisation programs are recognised as one of the most effective public health interventions. Although Australia's immunisation programs have been generally successful there is increasing concern that the level of immunisation is not adequate for effective disease control. In order to be fully immunised by the time they start school, children need to attend for immunisations on six occasions. Although coverage is high for infants (2, 4, and 6 months), this tends to decrease at 12, 18, and 60 months.

There is some evidence that children whose parents were born overseas are less likely to have been immunised, particularly if a language other than English is spoken at home.[298]

The lack of co-ordinated services providing immunisation appears to be one important barrier to parents ensuring their children are fully immunised. Problems of storage and transport may also reduce the potency of the vaccines and quality control of all steps in the immunisation chain is essential.

There is need for implementation of a National Immunisation Surveillance Scheme to monitor age-appropriate immunisation, immunisation rates in target populations, and vaccine uptake rates by geographical locations. There is need, too, for the implementation in all States and Territories of Australia, the requirement for mandatory checking of children's immunisation status at school entry and subsequently, at entry to all child-care and other educational institutions. The immunisation of young children who are in contact with health services for other reasons appears to be a useful means of increasing the proportion of children who are fully immunised.

The NHMRC Communicable Diseases Standing Committee, at its June 1992 meeting, endorsed time-specific targets for immunisation against mumps, measles and rubella (MMR) which have been included in this part.

Older people, people with chronic respiratory disorders, and residents of nursing homes are vulnerable to influenza. Immunisation has been shown to be effective in limiting the effects of influenza on the health of these groups.

Goal

To increase the proportion of the population who have been fully immunised

Targets

Priority population: Children 5-6 years	**level**	**year**
To increase the proportion fully immunised against vaccine-preventable diseases as recommended by the NHMRC at the time of school entry	90%	1994
	95%	1996
	>95%	2000

Baseline: ABS. 1991. 1989-90 National Health Survey: (Children aged 0-6 years): 53%

Priority population: Children 0-6 years	**level**	**year**
To increase the proportion who have received the first dose of the measles, mumps, rubella (MMR) vaccination	90%	2000

Baseline: ABS. 1991. 1989-90 National Health Survey: 86%

298 Powles J & Gifford S. 1990. How healthy are Australia's immigrants? In: Reid J & Trompf P, Eds. 1990. *The Health of Immigrant Australia.* Harcourt Brace Jovanovich, Publishers, Sydney. p 92.

Priority population: Children 2-3 years	**level**	**year**
To increase the proportion who are fully	90%	1996
immunised against measles, mumps and rubella	>95%	2000

Baseline: ABS. 1991. 1989-90 National Health Survey. Unpublished data. 69%

Priority population: Young women 5-19 years	**level**	**year**
To increase the proportion immunised against rubella	>95%	2000

Baseline: ABS. 1991. 1989-90 National Health Survey: 94%

Proposed targets

Priority population: Children 0-6 years
To increase the proportion who are fully immunised against measles, mumps and rubella

Priority population: Children 2 years	**level**	**year**
To increase the proportion fully immunised	90%	1996
against vaccine-preventable diseases as recommended by the NHMRC	95%	2000

Baseline: ABS. 1991. 1989-90 National Health Survey

Priority population: Children and young people 0-16 years
To increase the proportion fully immunised against measles, mumps and rubella

Priority population: All children 2 years
To increase the proportion who have completed recommended immunisation schedules, including *Haemophilus influenzae* type B

Priority populations:
Aboriginal/Torres Strait Islander children 2 years
NESB children 2 years
Children 2 years from low socioeconomic groups
To increase the proportion who have completed recommended immunisation schedules, including *Haemophilus influenzae* type B to the levels of the whole population

Priority population: Pregnant women
To increase the proportion screened for hepatitis B surface antigen before birth

Priority population: Newborn infants in those groups recommended by the NHMRC to receive immunisation against hepatitis B
To increase the proportion vaccinated against hepatitis B

Priority populations:
Health workers
Aboriginals/Torres Strait Islanders
To increase the proportion who have completed the recommended schedule of doses for immunisation against hepatitis B

Priority populations: Adults 65 years or more
People with chronic disease, particularly cardio-respiratory disorders
Residents of nursing homes
To increase the proportion who are immunised to reduce the risk of complications from influenza

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Communicable diseases		Health literacy	Schools

16 Mental Health[299]

Need for action

Mental health is an important aspect of general wellbeing, including the capacity to enjoy life and engage in interpersonal relationships. It is more than the absence of mental health problems and disorders. Mental health is a positive resource for individuals and the community.

Affectionate family and personal relationships (in the broad sense - recognising a wide range of family structures, including single parenthood), interpersonal and social skills, efficacy in parenting, positive self-concepts, and capacity for empathy, contribute positively to mental health. Excessive exposure to violence, being subject to abuse, degradation, discord, deprivation of stimulus and opportunity, and poor health status, are risk factors for mental ill health.

Goal

To enhance the mental health and wellbeing of individuals and the community

Proposed targets

Priority populations:
Aboriginals and Torres Strait Islanders
Women
NESB people
People from lower socioeconomic groups
To increase the proportion who express a sense of positive mental wellbeing

Priority population: The whole population
To increase the proportion enjoying affectionate family relationships

Priority population: The whole population
To increase the proportion with positive knowledge, attitudes and skills with respect to mental health issues

Priority population: People with mental health problems or mental disorders
To decrease the proportion affected by or experiencing stigma and/or discrimination

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Mental health problems and disorders	Reproductive health	Life skills and coping, Self care, Self help	Work and the workplace, Schools

299 While all other sections within Group 2.2 focus on behavioural risk factors, the Mental Health Workshop strongly recommended inclusion of this part on mental health, despite its falling outside the basic conceptual framework adopted for setting targets. The part emphasises the fact that mental wellbeing underpins many of the actions taken by individuals and communities to achieve positive changes in health status.

CHAPTER 2.3

Health Literacy and Health Skills

2.3.1 Health Literacy

Need for action

Health literacy is defined as the ability to gain access to, understand, and use information in ways which promote and maintain good health. Health literacy is itself dependent on more general levels of literacy [300] among the population. Lack of literacy can affect people's health directly by limiting their personal, social, and cultural development or indirectly, by limiting their access to health information, and thus to the development of effective knowledge and skills.[301]

Studies show that about one million Australian adults have difficulty carrying out everyday literacy tasks.[302] Among both children and adults, those most likely to experience literacy difficulties are the socioeconomically disadvantaged.[303]

By comparison with their highly educated counterparts, relatively poorly educated men are 23% more likely to have serious chronic illness and 90% more likely to perceive their health as fair/poor; relatively poorly educated women are 15% more likely to have serious chronic illness, and 10% more likely to perceive their health as fair/poor.[304]

Aboriginal people have disproportionately poorer English literacy than any other group in Australia - partly because English is not their first language, and partly because of poor access to, and participation in education. People from non-English speaking backgrounds suffer similar disadvantage.[305] [306] Among older immigrants in particular the social isolation associated with migration is often exacerbated by low literacy levels in English.

The Australian Language and Literacy Policy has stated, as its first goal: *All Australian residents should develop and maintain a level of spoken and written English which is appropriate for a range of contexts, with the support of education and training programs addressing their diverse learning needs.*[307] The Policy also includes goals for learning languages other than English and for maintaining and developing Aboriginal and Torres Strait Islander languages where they are still used.

From a base of general literacy, personal health literacy enables people to make informed health choices. While knowledge on its own cannot ensure that people are able or willing to make healthy choices, in most cases it is an important precondition.[308] It is also necessary for people to be able to use services appropriately and to manage effectively chronic conditions (for example people with diabetes needing to achieve metabolic control, or optimal use of medications).

The range of knowledge which people require in order to become and stay healthy is very broad. In many ways, the process of setting targets itself exposes one reason

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300 Literacy has been defined as *the ability to read and use written information and to write appropriately, in a range of contexts. It is used to develop knowledge and understanding, to achieve personal growth and to function effectively in our society.* Department of Employment, Education and Training. 1991. *Australia's Language: the Australian Language and Literacy Policy.* p 9.

301 Hartley R. 1989. *The Social Costs of Inadequate Literacy: A Report for International Literacy Year.* Australian Institute of Family Studies. Department of Employment Education and Training. Australian Government Publishing Service, Canberra. p xi.

302 Department of Employment, Education and Training. 1991. Ibid, p xiv. Australian Government Publishing Service, Canberra.

303 Department of Employment, Education and Training. 1991. Ibid, p 42.

304 National Health Strategy. 1992. *Enough To Make You Sick: How income and environment affect health.* Research Paper No 1. National Health Strategy, Melbourne. p38.

305 Department of Employment, Education and Training. 1991. Ibid, p 89.

306 Department of Employment, Education and Training. 1991. Ibid, p 39.

307 Department of Employment, Education and Training. 1991. Ibid, p 33.

308 Green L & Kreuter M. 1991. *Health Promotion Planning: an educational and environmental approach.* 2nd Ed. Mayfield Publishing Co, Mountain View. p 155.

many people have difficulty knowing what to do. There is a lot to learn. As in many other facets of life, knowing everything may not be as important as knowing what is relevant, and where to obtain further information.

The way in which individuals receive, interpret, and use health information varies not only according to their general literacy, but also according to their personal and social skills.[309] In addition, it varies with the extent of support they receive from the social, economic and physical environments within which they live and work.

For Aboriginals, Torres Strait Islanders, and NESB people, the achievement of personal health literacy in Australia has been further limited by the lack of culturally sensitive information available in their own languages.

The knowledge and skills required by these population groups are likely to differ from those needed by the non-Aboriginal, Australian-born population. For example, information on ways to access social support or health services may be vital for immigrants from countries with very different health systems. The consultation process which has assisted the development of the health goals and targets has highlighted the diverse knowledge requirements of different population groups.

Beyond the need for personal health literacy, too, there is need for increased community knowledge and understanding of the relationship between health and the wider social, economic and physical environments within which we live. As health care costs continue to spiral it will be increasingly important for the community to be actively involved in the choices which must be made about the most effective ways to reduce the burden of illness and injury in Australia and to improve the health of the population.

In several states (Tasmania,[310] Queensland,[311] Victoria,[312] New South Wales[313]) there have been impressive efforts to expand the health literacy of the community and to work with the community to develop more effective health services and health promotion initiatives.

There are limited baseline data available on levels of personal health knowledge in the community - particularly in relation to population subgroups. In the process of the review very limited data were found regarding community knowledge of factors other than personal health knowledge and behaviours which influence risk of specific diseases. Furthermore, the consultation process has highlighted the fact that people require different kinds of knowledge depending on their life stage, their current health status, their current patterns of behaviour and the environments within which they live and work.

Proposed Groups of Targets

Thus, the following sub-framework, comprising seven generic groups of targets, has been proposed. This reflects different requirements for knowledge by different groups of people at various stages of their lives.

- The whole population:
  Preparation for life stages and life events
- The whole population:
  Knowledge and skills required to achieve and maintain optimal physical and mental health
- People with acute or chronic conditions:
  Knowledge required to manage optimally conditions (for example, knowledge of peak flow monitoring by people with asthma, knowledge of treatment and prophylaxis by people with HIV, and knowledge of the purposes and common side effects of prescribed medications by older people).

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309 Winkleby M, Fortmann S & Barrett D. Social class disparities in risk factors for disease: eight year prevalence patterns by level of education. *Preventive Medicine.* 19: 1-12.

310 Health Policy Division, Department of Health, Tasmania. 199. *Wanted: Your views about a State Health Plan.* State Health Plan Issues Paper May 1990. Department of Health, Tasmania.

311 Queensland Health. Mackay Region. 1992. *Strategic Plan 1992-1997.* Mackay Regional Health Authority, Mackay.

312 Association of District Health Councils, Victoria. August 1991. *A Report on the work of Victoria's 16 District Health Councils 1990/91.* Association of DHCS of Victoria, Northcote.317

313 Healthy Cities Illawarra. 1992. Wollongong, NSW.

- The whole population:
  Knowledge of health services and how to use them

- The whole population:
  Knowledge of services and organisations which can assist in the achievement and maintenance of health (for example, self help groups and non-government organisations)

- The whole population:
  Knowledge of the relationship between health and the social, economic, and physical environments

- The whole population:
  Knowledge of effective mechanisms to bring about positive changes in the health of individuals and communities

The targets which have been proposed in these groups are examples only. Where the whole population has been identified as the priority population, it includes Aboriginals/Torres Strait Islanders and the NESB populations. Further, those working with these populations to improve health literacy and/or conduct research must recognise the heterogeneity of these population groups and take account of their different needs.

The development of this part of the report has highlighted the need for further research in this area - to identify current levels of, and to expand our understanding of, what might be termed optimal health literacy in the population (and subpopulations). Research should also identify suitable indicators to enable measurement of progress.

Goals

To achieve the goals of the Australian Language and Literacy Policy

To enhance knowledge and improve health literacy to enable people to make informed choices about their health

To enhance knowledge and improve health literacy to enable people to take an active role in bringing about changes in the environments which influence their health

Preparation for life stages and life events

Goal	Proposed targets (Examples)
To increase the proportion of the population who have knowledge and skills which enable them to prepare for and cope with normal life stages and life events	**Priority population: All parents of children under 5 years** To increase the proportion who can correctly identify the physical and emotional stages of child development **Priority population: All young women 9 - 15 years** To increase the proportion who can correctly identify the physical and psychological changes they are likely to experience with the onset of puberty **Priority population: All young men 10 - 16 years** To increase the proportion who can correctly identify the physical and psychological changes they are likely to experience with the onset of puberty **Priority population: All women 45 - 60 years** To increase the proportion who can correctly identify the physical and psychological changes they are likely to experience with the onset of menopause **Priority population: All people 65 years** To increase the proportion who can correctly identify the physical and psychological changes which are commonly associated with aging **Priority population: The whole population** To increase the proportion who can correctly identify social and psychological factors associated with their mental health

Knowledge and skills required to achieve and maintain optimal physical and mental health

Goal

To increase the proportion who can correctly identify actions they can take to reduce their likelihood of developing ill health

Proposed targets (Examples)

Priority population: The whole population
To increase the proportion who can correctly identify at least three of the following as important for the achievement and maintenance of cardiovascular health

- Quitting smoking completely
- Lowering high blood pressure
- Lowering high blood cholesterol
- Increasing regular physical activity
- Eating more cereals, fruit and vegetables
- Eating fewer high fat foods
- Eating less salt
- Reducing overweight
- Reducing stress[314]

Priority population: The whole population
To increase the proportion who can correctly identify two means by which they can effectively cope with life crises (See Life skills and coping)

Priority population: Sexually active young people and adults
To increase the proportion who can correctly identify safer sexual practices

Priority population: All older people 60 years or more
To increase the proportion who can correctly identify home safety hazards

Priority population: All young people and adults 18 years or more
To increase the proportion who can correctly identify recommended limits for alcohol consumption

Priority population: All women 20 - 70 years
To increase the proportion who correctly identify the interval at which they should have a Pap smear (2 years)

Priority population: The whole population
To increase the proportion who can correctly identify at least 2 measures they can take to reduce their risk of skin cancer (e.g.. wearing a hat, wearing protective clothing, avoiding exposure to midday sun)

Priority population: The whole population
To increase the proportion who understand the relationship between individual behaviours and increased risk of ill health and injury

Priority population: The whole population with relevant risk behaviours
To increase the proportion who can correctly identify ways in which behaviour change will result in risk reduction

314 For baseline data on levels of knowledge of these factors in relations to heart disease see: National Heart Foundation. 1991. *Community Attitudes Survey.*

Knowledge required to optimally manage chronic conditions

Goal	Proposed targets: (Examples)
To increase the proportion of people with chronic conditions who have the knowledge and skills they require in order to maintain their health at optimal levels	**Priority population: People with diabetes** To increase the proportion who can correctly identify the steps they must take to maintain effective metabolic control **Priority population: People with asthma** To increase the proportion who can correctly identify at least two steps they can take to reduce their likelihood of having an asthma attack severe enough to necessitate admission to hospital **Priority population: People 65 years or more using prescribed medications** To increase the proportion who can correctly identify the name, purpose, and common side effects of their prescribed medication **Priority population: People with HIV/AIDS** To increase the proportion who can correctly identify two treatments for HIV and at least one prophylaxis or treatment for an opportunistic infection

Knowledge of health services and how to use them

Goal	Proposed targets (Examples)
To increase the proportion of the population who are able to identify relevant health services and use them effectively	**Priority population: The whole NESB population** To increase the proportion who are able to correctly identify where to seek appropriate help for a range of common health problems **Priority population: All young people and adults 18 years or more** To increase the proportion who can correctly identify where and how to access accurate information about common health issues **Priority population: NESB young people and adults 18 years or more** To increase the proportion who know how to contact the Translation and Information Service run by the Department of Immigration, Local Government and Ethnic Affairs **Priority population: All young women 10 - 24 years** To increase the proportion who know where they can obtain assistance with problems associated with menstruation

Knowledge of services and organisations which can assist in the achievement and maintenance of health

Goal	Proposed targets (Examples)
To increase the proportion of people who have access to information and support from relevant community organisations	Priority population: People with chronic conditions and their carers To increase the proportion who can identify at least one community-based organisation to which they have access for relevant information and support (for example, Mastectomy Association, Alzheimer's Disease and Related Disorders Association, Schizophrenia Fellowship) Priority population: People experiencing life stages/ life events To increase the proportion who can identify at least one community-based organisation to which they have access for relevant information and support (for example, Nursing Mothers' Association, Combined Pensioners' Association)

Knowledge of relationship between health and social, economic, and physical environments

Goal	Proposed targets
To increase the proportion of the population who are aware of the relationship between population health status and the environments within which we live, work and play	Priority population: The whole population To increase the proportion who are able to identify at least three modifiable factors in their usual environments which influence their health status

Knowledge of effective mechanisms to bring about positive changes in the health of individuals and communities

Goal	Proposed targets
To increase the proportion of the population who can identify ways to take effective steps to bring about change in their own health and in that of their communities	Priority population: The whole population To increase the proportion who can identify at least one means by which they can act to improve the health of their communities (for example, set up or join community action groups, participate in formal structures such as District Health Councils or Healthy Cities)

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1	Chapter 2.2	Life skills and coping, Self care, Self help, Social support	Chapter 2.4

2.3.2 Life Skills And Coping

Need for action

In addition to health literacy, individuals require life skills (resilience and coping) which enable them to cope with, and adapt to the inevitability of life stresses - to achieve mental wellbeing. There is evidence that individuals whose self esteem is high, who are able to communicate well with others, who are integrated into community networks of their choosing, and who have problem-solving and conflict resolution skills, generally have greater capacity to take action to promote and protect personal health, and to participate in collective problem solving and action to improve the health of communities.[315]

Women, Aboriginals, Torres Strait Islanders, people who are mentally ill, and older people all suffer from negative stereotyping which may lead to reduced self esteem, limited life decisions, and to limited relationships with others. Moreover, stigma or negative stereotyping may lead to people taking up behaviours which are unhealthy, for example, young women who develop eating disorders as a result of a desire to conform to preferred images of women. For those who are mentally ill, community attitudes can limit their capacity to join the workforce for example, while among older people, stereotypes of aging can limit their independence and ability to care for themselves.

A sense of having the power to predict, control, and participate in one's environment, too, plays a central role in enabling individuals and communities to act effectively to transform their lives and their environments.[316] It is partly on the basis of people's own assessment of their ability to manage a specific situation that they choose what to do. Their knowledge and judgement of their own capabilities also influence their reactions to challenges and life events - and often, their willingness or ability to participate in formal or informal activities to bring about change.

Intense feelings of powerlessness among some groups in the community are associated with low socioeconomic status, poor access to appropriate social support, poor access to appropriate health and welfare services, inadequate housing and/or income, and negative community attitudes toward members of particular population groups.[317] [318]

Chapters 2.4 and 2.5 of this report include proposed targets to address some of these structural factors which influence life skills and life chances, and the need for knowledge of ways for individuals and groups to deal with negative stereotyping. Because many people will meet negative attitudes in the course of their lives it is necessary that they develop skills which minimise the impact of these.

Studies have shown that community involvement may be a significant psychosocial factor in improving perceived personal confidence, individual coping capacity and life satisfaction.[319] By providing opportunities for individuals to experience an increased sense of control and self-confidence, community organisations can help counter some of the environmentally-induced loss of control that frequently causes or exacerbates health and social problems on the individual level.[320]

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315 Mental Health Committee, NHMRC. 1992. *Draft Paper on Prevention in the Mental Health Field.* Paper prepared for the Health Care Committee, NHMRC.

316 Glanz K, Lewis M & Rimer B. 1990. Eds. *Health Behaviour and Health Education.* Jossey-Bass Publishers, San Francisco. p 267.

317 McCarthy W. 12 September 1989. *Is Retirement Working: Session 6 - Healthy Retirement. Benefits for the Individual.* Paper given to the House of Representatives Standing Committee on Community Affairs.

318 Australian Health Ministers' Advisory Committee, Women's Health Subcommittee. 1992. *Priority goals for inclusion in the Review and Revision of the National Health Goals and Targets.*

319 Glanz K, Lewis M and Rimer B. Eds. 1990. *Health Behaviour and Health Education.* Jossey-Bass Publishers, San Francisco. p 267.

320 Glanz K, Lewis M & Rimer B. Eds. 1990. Ibid, p 267.

Community participation in decision-making regarding structures and services which influence health has long been regarded as being of major importance to successful change in individuals and communities. Many community improvements, including public health enhancement, result from direct citizen concern and action.[321]

Associated with this is the concept of the competent community, one in which the various component parts of the community are able to collaborate effectively on identifying the problems and needs of the community; can achieve a working consensus on goals and priorities; can agree on ways and means to implement the agreed upon goals; [and] can collaborate effectively in taking the required actions.[322]

Throughout their lives people require a range of skills to enable them to cope with each life stage and the accompanying life events. Further, throughout life, many people face unexpected crises. The life skills highlighted by the targets below have been shown to assist people to cope with both developmental change, and with other crises.

While some targets have been proposed, no national baseline data have yet been found. Again, further research is required to develop our understanding of factors which prepare individuals and communities to cope positively with life stresses, to further our ability to develop these and to identify indicators to enable us to measure progress.

Where the whole population or age-specific population groups are the priority populations these include the Aboriginal, and Torres Strait Islander, and NESB populations. In developing initiatives with these groups it is important that particular attention be given to differing needs and, as a consequence, differing strategies.

Goals	Proposed targets
To enable people to cope positively with everyday life, and reduce mental distress associated with significant life events	**Developing resilience and coping** **Priority population:** **All young people 10 - 24 years** **All adults 25 years or more** To increase the proportion who express a sense of control[323] over their lives **Priority populations: Young people aged 12 - 18 years** To increase the proportion who have the opportunity to develop problem-solving skills through school or community education **Priority populations: All young people aged 12 - 18 years** To increase the proportion who have the opportunity to develop assertiveness skills through school or community education

321 Bracht N & Tsouros A. 1990. Principles and strategies of effective community participation. *Health Promotion International.* 5(3): 201.

322 Glanz K, Lewis M & Rimer B. Eds. 1990. Ibid, p 268.

323 Antonovsky A. 1979. *Health, stress and coping.* Jossey-Bass. San Francisco, Calif.

Priority populations: All young people aged 12 - 18 years
To increase the proportion who have the opportunity to develop conflict resolution skills through school or community education

Priority populations:
All children 5 - 11 years
All young people 12 - 24 years
All adults 25 years or more
To increase the proportion whose self esteem is high [324] [325]

Reducing stereotyping and stigma

Priority populations:
All young women 12 - 24 years
All adult women 25 years or more
All those with a mental health problem or mental disorder
All Aboriginals/Torres Strait Islanders
The whole NESB population
To reduce the proportion who have experienced discrimination or stigma associated with their gender, Aboriginality, ethnicity, or condition

Preparation for life stages

Priority population: All young people 15 - 24 years preparing to leave education
To increase the proportion who have the opportunity to have career advice and to plan for taking up employment

Priority population: All parents
To increase the proportion who express confidence in their parenting skills

Priority population: All adults 50 years or more preparing for retirement
To increase the proportion who have the opportunity to receive advice or preparation for retirement

Priority population: The whole population
To increase the proportion who receive advice or assistance in coping with loss and grief

Priority population: All older people 60 years or more
To increase the proportion who express confidence in their ability to manage stress associated with life events common to this stage of life (e.g. loss of a partner, relocation from a house to supported accommodation)

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324 Lawrance L. 1989. Validation of a self-efficacy scale to predict adolescent smoking. *Health Education Research.* 4(3):351-360

325 A range of different measures of self esteem will be required according to the age, language and culture of the priority population group.

Coping with life crises

Priority population: The whole population
To increase the proportion of the population who know where to seek help at times of crisis

Priority population: The whole population
To increase the proportion who feel confident to take actions/seek advice at times of crisis

Priority populations:
All young people 12 - 24 years
All adults 25 years or more
To increase the proportion who can provide simple support to one another at times of intense distress and crisis by: for example, allowing the person to express distress; being there for the person at time of need and caring compassionately for them

To enable people to participate actively in decision-making and activities to improve their health and their environments

Building competent communities

Priority populations:
All young people 12 - 24 years
All adults 25 years or more
To increase the proportion who have had the opportunity to participate actively in community activities to overcome problems which have been identified by the community

Priority populations:
All young people 12 - 24 years
All adults 25 years or more
To increase the proportion who have actively participated in community activities

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1	Chapter 2.2 (especially Mental health)	Health literacy, Self care, Self help, Social support	Work and the workplace, Schools, Health care settings

2.3.3 Safety Skills And First Aid

Need for action

Safety skills equip individuals with the capacity to avoid accidents and injury, or to minimise the morbidity and mortality associated with accidents and injuries.

Driving skills are a factor in road accident deaths, while much loss of life and disability could be avoided by effective emergency first aid. The high proportion of the Australian population who participate in water-based recreation makes the development of water safety and lifesaving skills important, including cardiopulmonary resuscitation skills.

Workers require training to acquire skills in the use of industrial equipment in order to reduce the risk of injury.

First aid training, and the ability and confidence to use resuscitation skills are particularly important at the site of acute and/or life-threatening medical events and injuries.

Goal

To improve safety and first aid skills

Targets

Priority population: All young people and adults 18 years or more	**level**	**year**
To increase the percentage who have ever learned about cardiopulmonary resuscitation	80%	2000

Baseline: National Heart Foundation Community Attitudes Survey 1991: 58.9%8

Priority population: All young people and adults 18 years or more	**level**	**year**
To increase the percentage who are confident in using cardiopulmonary resuscitation	75%	2000

Baseline: National Heart Foundation Community Attitudes Survey 1991: 53.5%

Priority population: Children 3 - 16 years	**level**	**year**
Preschools	**95%**	**2000**
Primary schools	**90%**	**2000**
Secondary schools	**85%**	**2000**
To increase the proportion who receive structured road safety education programs at school		

Baseline: 1992: 30% preschools, 50% primary and 15% secondary schools have road safety education incorporated into curriculum, programs, policies and school management plans

Proposed targets

Priority population: All children 9 - 16 years
To increase the proportion who have successfully completed an accredited cycling safety course
Baseline: VICROADS. Victoria. 1988. and RTA. NSW. 1988

Priority population: The whole population 10+ years
To increase the proportion who have successfully completed approved first aid courses

Priority population: Primary school age children
To increase the proportion of primary school children who receive fire safety education

Priority population: Children and young people 10-16 years
To increase the proportion who have successfully completed a water safety and lifesaving course

Priority population: All young people and adults (10+ years)
To increase the proportion who can swim at least 50 metres

Priority population: All motorcyclists seeking a motorcycle license
To increase the proportion who attend an approved motorcycle safety training course

Priority population: All motor vehicle drivers
To increase the proportion who have successfully completed an approved defensive driving course

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular mortality and morbidity, Injury	Safety behaviours	Health literacy	

2.3.4 Self Care And Self Help

a) Self Care

Need for action

Not all illness episodes present to the health care system, with most people self-managing a wide range of illnesses themselves and within their families.[326 327] Those conditions which do present to the health system are best treated in partnership. Many chronic health problems such as diabetes or arthritis can only be managed effectively with the active participation of affected individuals in the management and monitoring of their condition and their health.[328 329]

In this context self care refers to personal, active behaviours that the individual may undertake to influence his or her health in either health promotion or illness management.[330]

Four main areas of self care have been identified as important:[331]

- Health maintenance
- Disease prevention
- Self management of illness or disease
- Active participation in professional care

Other parts of this report deal with issues of health maintenance and disease prevention. The management of illness, especially chronic illness is the focus of this part.

Self management of illness or disease covers a number of areas including:

- self diagnosis, for example,
  - identifying possible causes of illness
  - deciding when to seek outside assistance;
- self monitoring, for example,
  - symptoms, disease processes or functioning
  - recording medication or treatment
  - monitoring side effects of drugs or treatment;
- treatment, for example,
  - drugs
  - alternate health therapies
  - traditional medicines
  - physical therapy
  - exercise
  - action plans;
- management of appliances and aids, for example,
  - colostomy bags
  - storage and use of insulin
  - kidney dialysis machines.

Many conditions are best managed when there is close liaison between health care professionals, patients, and their families in the development of jointly agreed management plans. These plans often rely heavily on self care. The active participation of the individual in their diagnosis, management, and treatment assumes that the individual has not only the knowledge but also the personal resources to undertake these activities. Without money to buy drugs or equipment, family or peer support, or freedom from other responsibilities to undertake self care activities the success of many self care plans is compromised.

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326 Australian Bureau of Statistics. 1991. *National Health Survey 1989-90.* Australian Bureau of Statistics, Canberra.

327 Bridges Webb C. 1974. The Traralgon health and illness survey, Part 2: the prevalence of illness and the use of health care. *International Journal of Epidemiology.* 3: 37.

328 Gay D. 1985. The treatment strategies of arthritis sufferers. *Social Science and Medicine.* 21: 507-15.

329 Krans L, Katz AH and Halst E. (Eds) 1991. *Diabetic Care and Research in Europe: the St Vincent Declaration Action Program.* World Health Organization, Copenhagen.

330 Dean K. 1989. Conceptual, theoretical and methodological issues in self care research. *Social Science and Medicine.* 29(2): 117-123.

331 Levin L, Katz AH and Halst E. 1977. *Self Care: Lay Initiatives in Health.* Croom Helm, London. p 11.

Language and cultural beliefs can be barriers to people from other cultural backgrounds participating effectively in the development and implementation of self care plans. If these plans are not developed in partnership, and do not take into account the views and experiences of the person with the health problem, their use can be restricted.

As the population ages, and increased emphasis is being placed on the home care of conditions which may previously have been managed in hospital or other institutions, carers are being expected to take increasing responsibility for many self care activities. Their role needs to be recognised and supported.

Information on self care practices in the management of chronic diseases is variable, making the setting of more explicit goals and targets difficult.

Goal	Proposed targets
To increase the personal skills and resources of people with chronic health problems to optimise management of their condition	**Priority populations:** **The whole population** **People with chronic conditions** **People from low socioeconomic groups with chronic conditions** **NESB with chronic conditions** **Aboriginals/Torres Strait Islanders with chronic conditions** To increase the proportion with skills and knowledge to enable self care
	Priority populations: **People with chronic conditions** **People from low socioeconomic groups with chronic conditions** **NESB with chronic conditions** **Aboriginals/Torres Strait Islanders with chronic conditions** To increase the proportion who have the opportunity to develop self care plans
	Priority populations: **The whole population** **People with chronic condition** **People from low socioeconomic groups with chronic conditions** **NESB with chronic conditions** **Aboriginals/Torres Strait Islanders with chronic conditions** To increase the proportion who engage in effective self care practices

Goal	Proposed targets
To improve the personal capacity of carers to manage the effects of caring for someone with chronic health problems	**Priority population: Carers of persons with chronic health problems** To increase the proportion with skills and knowledge in self care
	Priority population: Carers of people with chronic health problems To increase the proportion who have the opportunity to participate in the development of self care plans
	Priority population: Carers of people with chronic health problems To increase the proportion of carers who are able to engage in effective self care practices

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular mortality and morbidity, AIDS/HIV, Asthma, Diabetes, Mental health problems and disorders, Musculoskeletal disorders, Osteoporosis, Urinary Incontinence, Developmental disability		Life skills and coping	

b) Self Help

The growth and success of the self help movement confirms the benefits that individuals gain from sharing their experiences, and acting collectively. Groups exist for most chronic conditions, handicaps, and addictions. There are also large numbers of other groups which have an impact on people's psychological and social wellbeing: women's groups, mother's groups, groups for older people and groups focusing on major life events such as divorce or the death of a child. Many self help groups address needs unmet by the health care system[332] or for which the health care system has no effective response.

Self help generally refers to purposeful, organised activities, including self help groups, as defined by Speigel:[333]

> Self help and mutual support groups comprise those voluntary associations of individuals with a common problem, stigma or life situation which involve no professional control, although there may be professional involvement of a consultant of some kind and in which there is no profit.

The functions of self help groups may include:

- building social networks for mutual support
- developing skills and knowledge
- promoting self care and independence
- changing social attitudes
- influencing the attitudes and behaviour of health workers
- lobbying, advocacy for greater awareness of problems and issues and the development of relevant policies and services

The benefits reported by participants in self help include improved ability to cope with disease, learning to (re)live their lives, improved personal relationships, obtaining specialist knowledge, representing one's own interests actively, and utilising professional services purposefully.[334] Benefits have also been reported by family members and carers either directly through participating in groups[335] or indirectly as a result of improved family functioning.

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332 Campton P et al. 1988. Self Help in Primary Care: preliminary findings of a study in Liverpool. *Jnl Royal College of GP*. October. p 452-456.

333 Speigel K. 1982. Self help and mutual support groups: A synthesis of recent literature. In: Biegel DE and Napusek AJ. Eds. *Community Support Systems and Mental Health*. Springer Publishing, USA.

334 Trojan A. 1989. Benefits of self help groups: a survey of 232 members from 65 disease related groups. *Social Science and Medicine*. 29(2): 225-232.

336 Hunt R et al. 1990. Psychological responses to cancer: a case for cancer support groups. *Community Health Studies*. XIV(1): 35-38.

Many people facing major life events or life crises find participation in self help groups is valuable in strengthening their capacity to cope.[336] Young mothers, older people following bereavement, children following the loss of a parent through death or divorce, retrenched and unemployed workers are among the groups who are seen as benefiting from participation in self help groups. These groups are important in providing direct information sharing, social and psychological support, and in terms of the practical knowledge and skills they offer to each other.

Self help groups have an important role in identifying areas where the current health care system is failing to meet the needs of specific groups, or is providing services that are inappropriate. The Nursing Mothers' Association, for example, besides providing support and information to its members, has been very active in bringing to the attention of health workers issues that they feel need to be addressed for breastfeeding to be promoted in Australia. Self help groups for people with HIV/AIDS have also advocated for the provision of, and improved access to appropriate health and support services.

There is some concern that self help groups are used more readily by women and persons from higher socioeconomic backgrounds.[337] Many explanations have been put forward as barriers to participation including the perceived heavy reliance of self help groups on sharing feelings, cultural unacceptability of sharing problems with strangers, language barriers, transport difficulties, finding carers for children and sick relatives, the lack of knowledge that such groups exist, and their possible benefits.

In expanding opportunities for all members of the population to participate in self help groups, therefore, it will be necessary to consider such concerns.

Goal	Proposed targets
To increase the proportion of individuals with chronic conditions and their carers, or those facing critical life events, who have access to self help groups	**Priority populations:** **People with chronic conditions or addictive problems** **People experiencing stigma associated with age, gender, race, disability, or sexual preference** **People experiencing life stages or major life events** To increase the proportion who have the opportunity to participate in self help groups **Priority population: Carers and families of persons with chronic conditions or addictive problems** To increase the proportion who have the opportunity to participate in self help groups

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Breast cancer, Perinatal and infant mortality/morbidity, Teenage pregnancies and births, Childbirth, Abortion, Mental health problems and disorders, Musculoskeletal disorders, Sight disorders, Hearing disorders	Chapter 2.2 (especially Breast feeding, Infertility)	Health literacy, Life skills and coping	

336 Deans G. 1988. Cancer Support Groups - who joins and why? *British Journal of Cancer.* 58: 670-674.

337 Davis A, Napier L and Hay A. 1991. *Social Networks and Health.* A review of the literature commissioned for Neighbourhood Networks Project of the Macquarie Health Service. Campbelltown Community Health Centre, NSW.

2.3.5 Social Support

It is within the area of social support that many of the pre-requisites for health are to be found. The formal and informal support structures of society help to meet the needs of individuals and families for adequate income, appropriate and affordable housing, legal protection, access to educational and recreational opportunities, and a sense of belonging which have been identified as important for social wellbeing,[338] [339]and have been outlined earlier in this report as among the pre-requisites for health.

The concept of social support is here being defined as the interaction between people in which they give and receive mental, emotional, informational, operational and material support.[340] It is seen as encompassing several levels - immediate personal relationships, neighbourhood and community support, services provided by voluntary agencies, and the services and policies of governments.

The categories of social support are seen as encompassing:

- Material support, for example, money, goods, medicines
- Operational support, for example, services, community infrastructure
- Informational support, for example, advice, advocacy, guidance
- Emotional support, for example, empathy, love, encouragement
- Mental support, for example, common ideology, beliefs, philosophies

This support is both direct and indirect. It can be seen as direct support in consumables such as food, child care, housing, transport or education, and indirect through providing a sense of belonging and love, community valuing of individuals' social and cultural backgrounds, underlying legal rights as citizens, and so on.

Social support, especially as expressed through close personal relationships found in the family, has been shown to influence the outcomes of health and wellbeing.[341] [342] Several studies have associated lack of social support with increased mortality in the old,[343] increased incidence of coronary disease,[344] and susceptibility to chronic illness.[345]

It remains unclear whether social support in itself prevents illness or whether it acts as a buffer against stressful situations reducing their impact.[346] For individuals with established health problems and their carers adequate social support is important in being able to cope on a day to day basis.

Not all social support is good however. The quality of the relationship rather than its presence or absence seems to be important in promoting and protecting health.[347] Couples

338 Commission of Inquiry into Poverty. 1975. *Poverty in Australia*. Australian Government Publishing Service, Canberra.

339 National Inquiry into Homeless Children. 1989. Report. Human Rights and Equal Opportunity Commission.

340 Kumpusalo E. 1991. *Social Support and Social Care*. Briefing paper for the Sundsvall Conference on Supportive Environments. National Agency for Welfare and Health. Sweden.

341 Cohen S, and Syme SL. 1985. *Social Support and Health*. New York, Academic Press.

342 Lin N. 1986. *Social Support, Life Events, and Depression*. New York, Academic Press.

343 Seeman T, Kaplan G et al. 1987. Social ties and mortality among the elderly in the Alameda County study. *American Journal of Epidemiology. J* 127: 714-23.

344 Ruberman L. 1984. Psychosocial influences on mortality after myocardial infarction. *New England Journal of Medicine*. 311(9): p 552-59.

345 Reed D et al. 1984. Psychological processes and general susceptibility to chronic illness. *American Journal of Epidemiology*. 119: 356-370.

346 Rook K and Dooley D. 1985. Applying social support research. *Journal of Social Issues*. 41: 5-28.

347 Schafer et al 1981. The health related functions of social support. *Jnl Behavioural Medicine*. 4: 381-406 Wellman et al 1991. Integrating individual, relational and structural analyses. *Social Networks*. 13: 223-49

with problems in their marriage, families who give wrong or limited advice to people with acute or chronic medical conditions, peers who support dangerous behaviours such as narcotic use, and health services which are judgemental are examples of some of the limitations of social support[348] in promoting health.

Reciprocity is an important issue in social support.[349] While this is easy to see in informal social support it is also important in relationships with formal support services so that the person receiving the support is seen as bringing skills and experiences to the relationship which need to be acknowledged and utilised. In this way people who need help with managing a difficult child, or unemployed people needing financial assistance are seen as bringing to the situation resources that can be used to enable a mutual attempt to deal with problems.

Formal social support services are used by all individuals and families at some time. However three groups have been identified as having special needs:[350]

People experiencing transitional or major life events such as:

- birth of a child
- marriage
- divorce or separation
- family death
- migration
- retirement
- diagnosis of a life threatening disease.

People who find themselves without established or diminishing social support networks as a result of discrimination or stigma associated with:

- age
- gender
- race or ethnic origin
- disability
- social stigma (recently released from prison)
- sexual preference.

People who have few resources available within their immediate social network such as:

- low income families
- recently arrived migrants
- residents of locationally disadvantaged communities
- Aboriginals and Torres Strait Islanders
- Individuals who have been institutionalised for long periods of time and are now expected to cope in the wider community
- carers of aged and disabled.

As well as having special needs for social support many of these groups have been identified elsewhere in this report as representing people whose health needs are greater than those of the community as a whole.

There is growing recognition that the social environment has significant impact on health outcomes. Adequate housing and income, opportunities for work which is safe, access to transport and community infrastructure, educational and recreational opportunities have been identified by many groups as necessary to provide a healthy living environment.[351 352 353]

The recently published National Health Strategy Research Paper on inequalities in health[354] found that socioeconomic

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348 Schilling. 1987. Limitations of social support. *Social Services Review.* 61: 19-31.

349 Wolcott I. 1989. *Family Support Services. A review of the literature and selected annotated bibliography.* Australian Institute of Family Studies. Bibliography Services.

350 Davis A, Napier L and Hay A. *Social Networks and Health.* A review of the literature commissioned by the Neighbourhood Networks Project of the Macarthur Community Health Centre. Campbelltown. N.S.W.

351 Black D. (Chairman). 1980. *Inequalities in Health: report of a research working group.* Department of Health, & Social Security, London.

352 Jolly D. 1992. *Health Goals and Targets for Australian Children and Youth.* Child, Adolescent and Family Health Service, South Australia.. p 89.

353 Fox J and Carr-Hill. 1989. Introduction in Fox J (Ed) *Health Inequalities in European Countries.* Gower, Brookfield.

354 National Health Strategy. 1992. *Enough to Make You Sick.* Research Paper No 1. Treble Press. Melbourne. p 38.

disadvantage is associated with health and confirmed the association between low income and poor health for both adults and children after controlling for all other variables (such as ethnicity, education, other risk factors, etc). It showed that, by comparison with their high income counterparts:

- low income boys are 45% more likely to have serious chronic illnesses, and low income girls are 31% more likely to do so;
- low income men are 47% more likely to have serious chronic illnesses, and low income women are 13% more likely to do so; and
- low income men are 81% more likely to report being in fair/poor health, and low income women are 64% more likely to do so.

Adequate income is particularly important for children as childhood deprivation may not only affect immediate health outcomes, but also long term health status.[355]

Providing opportunities for all members of the community, especially those whose health is most vulnerable, to immediate social networks and formal social support services which are accessible and appropriate is seen as one way of improving access to resources which are needed for health. Elsewhere in this report goals and targets have been set for adequate and affordable housing, access to paid employment, and literacy.

Goal	Proposed targets
To provide effective social support to the whole population, but especially to those in greatest need	**Priority populations:** **The whole population** **Individuals facing major life crisis or life event** **Individuals without established social support** **Individuals with limited resources** To increase the proportion of the population who have immediate social environments which provide adequate and appropriate social support **Priority populations:** **The whole population** **Individuals facing major life events or life crises** **Individuals without established social support** **Individuals with limited resources** To increase the proportion of people who have access to formal social support services which are accessible and appropriate **Priority populations:** **The whole population** **Individuals with limited resources** To reduce the proportion of people living below the poverty line[356] *Baseline data: 1 in 8 households below poverty line in 1988. From Bradbury B and Doyle J. 1992. Family Income and Economic Growth in 1980s. Social Policy Research Centre. Reports and Proceedings No 102*

355 Blaxter M. 1990. *Health and Lifestyle.* Routlege. London.

356 Poverty lines published quarterly by Institute of Applied Economics and Social Research. University of Melbourne.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1	Diet and nutrition, Reproductive health (infertility)	Health literacy, Life skills and coping	Chapter 2.4

CHAPTER 2.4

Healthy Environments

Healthy Environments

Creating supportive environments for health is a vital component of any effort to achieve greater equity in health, particularly because the adverse impact of the environment on health is generally greatest among disadvantaged groups. Environmental issues were addressed in the original Health for All Australians report, and targets were set to achieve reductions in occupational and environmental health hazards. This report substantially expands those proposals.

In Commonwealth legislation, environment is defined so as to include all aspects of the surroundings of human beings, whether affecting human beings as individuals or in social groupings. Such a broadly based definition is reflected in the construction of the proposals in this chapter. Providing clean water and waste disposal, and safe food and shelter have been concerns of public health workers for more than 150 years. Major innovations to separate drinking water supplies from sewage led to significant improvements in public health in the early part of the century. Improvements in the quality and safety of housing and working conditions have continued through the twentieth century to be matched by corresponding improvements in health.

Despite this great progress, the poor quality of drinking water, and difficulties with the separation of sewage continue to be major determinants of the incidence and distribution of water-borne and related diseases in different areas of Australia, and amongst particular groups in the population,

especially Aboriginals and Torres Strait Islanders. Continued progress is needed even in these most basic of public health tasks.

This chapter of the report focuses on some of the major environmental issues in public health. The connection between health and the environment has been re-evaluated in light of the growing public understanding of the impact of current patterns of settlement and style of living on the ecology of the Earth, as well as the dependency of human health and wellbeing on continuing ecological sustainability. This understanding has generated community concerns, a range of legislative and policy responses by government to protect and restore the environment, and action by the private sector to take an environmentally responsible approach to business activity.

One outcome of this heightened awareness and activity is that sectors other than health have increasingly taken up the management of environmental influences on health. This has led to the role and function of the health sector becoming narrowly focussed on advising specialised agencies about the extent of reported disease and the risk of disease outbreaks. Further, the traditional public health approach to infection control or identification of point-source pollution has led to setting standards for single factors associated with damage to human health rather than a more holistic approach to environmental management. Until recently, this approach was seen as an adequate response, but it is becoming increasingly clear that this is no longer a sufficient response to increasingly complex problems.

The recent work by the NHMRC on the long term impact of climatic change and in providing a health perspective to ecologically sustainable development demonstrates that concern for the environment is not only focussed on the more immediate and narrowly defined public health issues, but also on the long term impacts. Such progressive work needs to be further supported.

Developing goals and targets that relate comprehensively to today's environment and which reflect more holistic environmental management has proved challenging. A sector-based approach to achieve comprehensive coverage of the issues affecting health has been adopted in this report. This is consistent with a strategic planning approach by organisations, and the benefits are considerable in terms of defining arrangements for accountability and monitoring. In this report six broad sectors are presented. The first three cover the total environment:

- the physical environment;
- housing, home and community infrastructure; and
- transport.

The other three categories encompass organisations that influence the internal and external environment. These organisational systems are sometimes termed settings. These are:

- work and workplaces;
- schools; and
- health care settings.

The approach adopted in the development of these proposals is based on a notion of inter-sectoral partnership. Where possible, national agencies and experts within the sectors under consideration have been engaged to provide advice and guidance. This consultation process has also included the limited involvement of interested community groups. In the areas of Transport, Work and the workplace, and Schools, workshops were held with a range of individuals from the relevant sector. The proposals in these parts of the report derive from the outcomes to these workshops. Details of the workshops and participants are included in Appendix 2.

Development of the proposals on the physical environment has been undertaken in conjunction with members of the NHMRC Committee on Environmental Health. In the proposals relating to housing, advice has been received from several sections of the Commonwealth Department of Health, Housing and Community Services, and a range of community groups. The proposals relating to health care settings have been developed by drawing on advice from the Community Health Association (through CHASP), the Australian Hospital

Association, and the Victorian Hospitals' Association's Health Promoting Hospitals Project.

Through this consultation and discussion it is clear that health goals and targets do not always fit comfortably alongside the established strategies and practices of the other sectors. It has been our intention to try to reflect existing strategies and priorities of these sectors first, and to locate goals and targets within these sectors second.

A number of important issues emerged through the consultation. These include the need to apply a long term perspective when considering the impact of economic development on health, the need for an integrated approach to planning and environmental management, and the need for community participation in decision making. The first issue concerns the need for equity to be seen not only in terms of differences between population groups, but also between generations. This is a common theme when considering the physical environment, transport, and the development of community infrastructure where there is an increasing understanding of how the ways in which resources are managed today can enhance or limit opportunities for future generations.

In formulating an ecologically sustainable development strategy for Australia, health impact should be seen as a critical consideration. This is often best done through incorporating health issues into an integrated approach to planning and environmental management. Adopting an integrated approach to planning which crosses the intersectoral boundaries is essential for the achievement of the health goals and targets proposed in the individual parts of the Healthy Environments chapter.

Community participation is essential for the achievement of the health goals and targets proposed in this chapter as it is for those in other chapters. For example, changes in transport will not only require that individuals consider increased use of public transport, but will also affect pricing structures of fuel. Those affected or potentially affected by environmental issues, need to be involved in the earliest stages of planning and development. Not only does this help to prevent possible conflicts but it can clearly identify the concerns of those affected and enable their incorporation into the decision making process from the outset.

In proposing health goals and targets which impact upon other sectors, it is imperative that the intent and process be clear and avoid the dangers inherent in cross-sectoral ventures. In Section 1 of the report, several existing practical opportunities for collaboration are identified. These could form a substantial basis for the further development of proposals in this chapter.

Within such effective partnerships, it would be feasible to explore the potential for integrating health goals to reduce risk and promote good health into the work programs of other sectors rather than to devise targets prescribing particular strategies. From early contacts with a range of government departments and non-government organisations which are engaged in the management of key elements of the environment, it is clear that target-setting should proceed at a pace that will allow for the development of a true partnership.

Although the main focus of this chapter of the report is the impact environments and settings have on the health and wellbeing of the population, it is recognised that a population-based approach to determining targets has significant limitations when looking at environmental impact. For these reasons, intermediate indicators have been proposed. These indicators are used as proxies for a desired change in health status among priority populations and where possible these indicators are based on measurable outcomes. The intention has been to indicate clearly why a certain target is desirable and to recognise that there may be more than one way of achieving a target.

All the proposals in this chapter will benefit from further discussion and development.

2.4.1 The Physical Environment

The physical environment is of crucial importance to the health and wellbeing of Australians. As evidence grows of the threats to the environment by human activity, governments, industry, and individuals are increasingly being called upon to look at ways of protecting and improving it.

The signing of the Inter-Governmental Agreement on the Environment (IGAE) by the Prime Minister, Premiers, and Chief Ministers of the ACT and NT in May 1992, confirmed the commitment of the Commonwealth and States/Territories to environmental practices and procedures to form the basis of ecologically sustainable development[357]. For the first time in Australia a vehicle is now in place for the development of agreed national standards, guidelines, and goals to decrease environmental pollution.

The development of these new benchmarks will require a partnership between health and environmental agencies. Formal links have already been established between the NHMRC and the Australian and New Zealand Environment and Conservation Council (ANZECC) to develop agreed standards and guidelines for subsequent consideration and adoption through IGAE.

The NHMRC is already considering the health implications of a broad range of environmental issues including, for example, long-term climate change and ecologically sustainable development. The use of environmental health impact assessment is also being considered as an approach to risk assessment and management.

The newly formed Commonwealth Environment Protection Agency together with the proposed National Environment Protection Authority will be responsible for the development of standards for national adoption. The NHMRC's role in environmental health will continue to be one of providing scientific guidance for Commonwealth, State and Territory adoption and implementation.

This part of the report was developed from a set of goals proposed by the Environmental Health Committee of the NHMRC and refined in consultation with them. There remain a number of important issues in the physical environment for which goals and targets have not been set. The generation, storage and disposal of hazardous and intractable waste, issues surrounding site contamination and leakage from landfill and indoor pollution will require further examination. It is important that plans to further develop goals and targets in this area be done in consultation with the relevant government bodies, community and environmental groups.

The goals and targets in this part are organised in to two main groups:

- health and the physical environment (global issues, water and air quality, soil contamination, waste and indoor environments)
- planning for healthy environments.

a) Health and the Physical Environment

Need for action

Environmental pollution by potentially toxic agents has long been the main source of environmental health problems in urban industrialised societies. Potentially toxic environmental pollutants include organic chemicals (including organochlorides, other pesticides, and volatile organic compounds such as benzpyrene), heavy metals (lead, cadmium, and mercury), oxides of sulphur and nitrogen, ozone, and photochemical oxidants (major air pollutants) and sources of ionising radiation (from radon gas, uranium mining and nuclear waste). These

357 *Inter-governmental Agreement on the Environment*, Commonwealth of Australia. May 1992.

and many other exposures continue to pose significant immediate and long term environmental health risks within Australia,[358] and many of them impinge disproportionately on those who are most socially disadvantaged in society.

Most of these chemical and physical agents are at such low concentrations in air, water or food that it is often difficult to identify specific adverse health effects in epidemiological studies. Nevertheless, the general prudent assumption is that if adverse health effects are known to occur at high levels of exposure, then commensurately smaller effects are likely to occur at low levels particularly through repeated exposure. There are also some important examples of adverse effects at low levels, for example, research in Australia and overseas has indicated that exposure to environmental lead in early childhood impairs neuro-psychological development, resulting in subtle deficits in mental abilities.[359]

Problems of environmental infectious agents also persist. Many Aboriginals and Torres Strait Islanders, for example, do not have satisfactory access to safe drinking water.[360] Outbreaks of Legionnaires' disease, amoebic meningitis and blue-green algal blooms are further reminders of the risks posed by the complex microbial environments in which humans live.

The scale of environmental health problems is now broadening.[361] [362] For the first time, public health hazards of global environmental changes that entail disruption or depletion of the natural systems upon which sustained health depends need to be addressed. There is a rising awareness of the potential health effects of climate change (see Table 2), ozone layer depletion, acid rain, and land degradation. Although health researchers and policy makers have been slow to recognise that these are potential major public health problems, the equation is simple disruption of ecosystems leads to impairment of life support systems, which in turn threatens the health of humans.

Good health depends absolutely on a sustained supply of clean air, safe water, adequate food, tolerable temperature, stable climate, diverse coexistent species, and protection from solar ultraviolet radiation and acceptable amenity. Humanity cannot live outside or without this ecological support system.

As the community becomes more concerned and involved in ensuring that the quality of the environment is protected and improved it is becoming clearer that issues of equity are important. Differences in access to healthy environments need not only to be addressed within Australia but between countries and generations.[363]

As well as paying particular attention to certain major environmental health hazards, it is important that Australia develop the capacity for assessing possible health impacts of proposed developments.[364] This will require systematic documentation of specified exposures, identification of biological markers of human exposure, and the ability to link these to health outcomes.

It is also important to recognise that there are significant overlaps between public

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358 NHMRC. *Ecologically Sustainable Development: The Health Perspective - June 1992.*

359 McMichael AJ, Baqhurst PA, Wigg NR et al. 1988. Port Pirie cohort study: environmental exposure to lead and children's abilities at the age of four years. N England J Med. 319:468-75.

360 Royal Commission into Aboriginal Deaths in Custody. 1991. National Report. 1(2): 343. Australian Government Publishing Service, Canberra.

361 World Commission on the Environment and Development. 1987. *Our Common Future.* Oxford University Press. Oxford.

362 McMichael AJ. 1992. Ecological disruption and human health. *Aust J Public Health.* 16: 3-5.

363 Ecologically Sustainable Development Working Group. 1991. *Final Report : Executive Summaries.* Australian Government Publishing Service, Canberra.

364 Ewan C et al. 1992. *National Framework for Health Impact Assessment in Environmental Impact Assessment.* Vol 1 & 2.

health, environmental protection, and occupational health and safety. Reducing exposure of the whole population to pollutants and health hazards involves control of the hazard at source, which is often primarily or substantially a working environment, including clean ups of spills and contaminated sites. It is necessary, therefore, that occupational health and safety activities be seen within this broader environmental context.

Global Issues

Stratospheric ozone depletion, climate change, and acid rain are environmental challenges that will require long term strategic interventions that need to see humans and their activities as part of an integrated ecological system. Interventions will need to be at many levels and require the co-operation of many different sectors, government departments, community groups and corporate interests.

Table 2: Potential Health Effects of Long Term Climate Change

- *Increases in skin cancer and ocular damage due to increased exposure to ultraviolet radiation as depletion of the ozone layer progresses, and cloud density and precipitation decrease*
- *Increasing exposure to allergens and resultant respiratory effects*
- *Increases in water-borne disease*
- *Higher incidence of heat stress, particularly among vulnerable groups such as the elderly, the frail, and workers*
- *Increases in the transmission of vector-borne diseases*
- *Injury, social dislocation, and post-traumatic psychological problems resulting from more frequent natural disasters*
- *Adverse effects on health and welfare resulting from the economic consequences of climate change. There may also be positive aspects as employment grows in renewable energy technology industries and value-added export markets are created*
- *Introduction or re-introduction of exotic communicable diseases*
- *Reduction of the community's economic and social wellbeing due to international environmental degradation and population migration*
- *Changes in agricultural productivity, with consequent socio-economic and socio-cultural effects*

Derived from NHMRC. 1991. *Health Implications of Long Term Climate Change*. Australian Government Publishing Service, Canberra.

Goal	Proposed targets
To maintain the integrity of the biosphere which is necessary to sustain human life	**Priority population: The whole population/global** To reduce the long term health impact of global warming Intermediate indicator: To stabilise greenhouse emissions at 1990 levels by 2002.[365] *Baseline: To be derived from United Nations "Environmental Programs" International Climate Change Programs & CSIRO* **Priority population: The whole population/global** To reduce the long term health impact of ozone depletion Intermediate indicator: Reduction in the production of ozone-depleting gases *Baseline: To be derived from United Nations International Carbon Dioxide Monitoring Program*

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Skin cancer			

Water Quality

The need to protect and improve the quality of water is fundamental to the health of all Australians, and there is concern that many rural, Aboriginal and Torres Strait Islander communities do not have access to permanent sources of potable water. Concerns are also being expressed at pollution of beaches and waterways, and the impact this may have not only on recreational users, but also on downstream activities. As programs develop to recycle storm water and effluent, monitoring their safety will become an important public health issue.

Australia's existing water monitoring systems are able to measure adequately contaminants in drinking water. However, data bases which link morbidity and water quality measurements need to be developed to establish a link between these contaminants and subsequent morbidity. For example, monitoring of blue-green algal blooms needs to be linked with measures of morbidity which may be associated with it.

Goal	Proposed targets
To ensure the access of all Australians to safe water supply	**Priority populations:** **The whole population** **Aboriginals and Torres Strait Islanders** **Rural and remote communities** To increase the proportion of people with access to safe drinking water Intermediate indicator: To increase the number of monitored water drinking sites Intermediate indicator: To increase the proportion of monitored water drinking sites which meet NHMRC standards *Baseline: To be derived from State and Territory Water Authorities' monitoring databases and ATSIC Study of living conditions in isolated and remote communities*

365 Australian Government Agreement on this target is subject to major trading partners meeting the targets and resulting in no consequent economic disadvantage to Australia.

Priority population: Recreational users of waterways and beaches
To improve the water quality of recreational waterways and beaches
Intermediate indicator: To increase the proportion of recreational waterways and beaches meeting acceptable health standards and guidelines[366]
Baseline: To be derived from local government and State health department data bases

Priority population: The whole population
To improve quality of reclaimed water
Intermediate indicator: To increase the effective treatment of reclaimed waters[367]
Baseline: To be derived from Local government and State health department data bases

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Communicable diseases, Sight disorders			Housing, home, and community infrastructure

Air Quality

The development of health goals and targets for air pollutants is severely restricted by the lack of appropriate data bases linking pollutant levels with public health effects. There is broad recognition that public health researchers, health care facilities, and primary health care workers will need to be involved in the collection and analysis of morbidity data related to exposure to dangerous, or potentially dangerous, environmental hazards. Particular areas of concern include the inability to link long term occupational exposure with morbidity data from hospitals and other sources, and the paucity of data on the incidence and prevalence of accidental exposure to aerosols from agricultural, veterinary and industrial chemicals, and their relationship to subsequent ill health.

Despite the limitations of available Australian data, there is growing community concern about the possible health impact of particulate and gaseous air pollutants. The evidence of a link between respiratory morbidity and ambient atmospheric levels of particulates, derived secondary photochemical oxidants and other gaseous pollutants is well established.[368] [369] However the magnitude of the effect of this on Australian morbidity or mortality is not clear.[370] A number of studies in Australia over the past two decades have demonstrated a link between blood lead levels in children and impaired intellectual performance.

Recent outbreaks of legionella infection have highlighted the continuing importance of transmission of bacterial infections in air-borne aerosols. While these have been associated predominantly with indoor exposure, some infected individuals were exposed to legionella in aerosols in public areas.

366 NHMRC/AWRC. 1990. Australian Guidelines for Recreational Use of Water

367 NHMRC. 1987. Reclaimed Water Guidelines.

368 NHMRC. 1992. *Ecologically Sustainable Development: The Health Perspective*. p 61-63.

369 Rennick G J and Frederick C J. 1991. Are children with asthma affected by smog? *Medical Journal of Australia* 159: 837-39.

370 Abramson M and Voigt T. 1991. Ambient air pollution and respiratory disease. *Medical Journal of Australia*154: 543-545.

Goal

To protect and improve the quality of ambient air

Proposed targets

Priority population: Adults and children with respiratory diseases or disabilities
To reduce ambient exposure to pollutants, especially particulate, hydro-carbons and other volatile organic compounds, oxides of nitrogen, carbon and derived secondary pollutant photochemical oxidants
Intermediate indicator: Reduction in ambient air pollution
Baseline: To be derived from National Emissions Registry and State/Territory Environmental Agency monitoring records

Priority population: The whole population
To reduce exposure to legionella species in air-conditioning systems and cooling tower water aerosols
Intermediate indicator: Increase the proportion of cooling systems which are regularly maintained
Baseline: To be derived from South Australian and NSW task force reports

Priority population: The whole population
To reduce exposure to lead in ambient air
Intermediate indicator: Reduction in measured lead levels in ambient air
Baseline: To be derived from State and Territory Environmental Protection Agency Lead Monitoring Programs 1991-92

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Communicable diseases, Asthma			Transport, Work and the workplace

Soil Contamination

There are, as yet, few appropriate indicators through which morbidity from exposure to inhaled or ingested contaminants particularly from heavy metals, carcinogenic compounds, and pesticides can be determined. This lack of essential bio-markers seriously inhibits the development of appropriate abatement strategies. However, contamination of soil has been associated with high blood lead levels in children living in areas with heavy traffic and older residential areas,[371] in close proximity to industrial sites and lead smelters in Broken Hill, Port Pirie, and Newcastle.

Pesticides have been used in world agriculture for many years, and despite the perceived economic necessity of agricultural chemicals, there is need to ensure that the residues consumed are kept to a minimum. Ensuring that contamination of the food chain by pesticides is within acceptable limits requires ongoing monitoring[372] through such programs as the Australian Market Basket Survey, and the National Residue Survey of the Department of Primary Industry and Energy.

Goal	Proposed target
To reduce the health hazards associated with soil contamination	**Priority population: Children 0-4 years in metropolitan and industrial centres** To reduce the number of children with blood lead levels above the NHMRC level of concern as a result of ingestion of contaminated soil Intermediate indicator: To reduce the level of lead contamination in the soil *Baseline: To be derived from Port Pirie Lead Abatement Study*
To decrease exposure to agricultural chemicals resident in soil to ensure their accumulation in the food chain does not exceed NHMRC standards	**Priority population: The whole population** To reduce exposure to food which is contaminated by agricultural chemicals Intermediate indicator: To reduce the number of food products produced or imported into Australia that fail to met NHMRC residue standards *Baseline: To be derived from National Residue Survey, Department of Primary Industry and Energy. Market Basket Survey, National Food Authority*

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Nutrition		Work and the workplace

371 Fett MJ, Mira M , Smith J et al. 1992. Community prevalence survey of children's blood lead level and environmental lead contamination in Inner Sydney. *Medical Journal of Australia*. 157: 441

372 World Health Organization. 1991 *Report of the Food and Agriculture Panel*. WHO. Geneva.

Waste

Clinical and related wastes are defined as wastes arising from medical, nursing, dental, veterinary, pharmaceutical or similar practices, and wastes generated in hospitals during the investigation or treatment of patients or in research projects.

Much of the waste can be hazardous to those who come in contact with it so that special procedures are necessary for its disposal. Not all clinical and related wastes are hazardous, though they can present handling, storage, transport, and/or disposal problems due to their sheer volume and the fact that some of these wastes can be potentially hazardous to personnel involved and the public if not disposed of properly.[373]

Australia produces small amounts of radioactive waste from nuclear medicine facilities, research or industrial use. Mining industries also generate radioactive waste that needs to be disposed of in a safe manner. The NHMRC Radiation Health Committee is actively involved in establishing codes of practice in the relation to health and research use, and the Commonwealth Protection (Nuclear Codes) Act 1978 is implemented at State level in dealing with mining waste.

The impact on the public health, particularly the health of occupationally-exposed workers, from historically contaminated sites including coal gas manufacturing facilities, sheep dips, and ordinance plants remains to be quantified. Development of more comprehensive goals and targets in this area requires further investigation.

Goal	Proposed target
To ensure that hazardous or toxic waste is adequately stored, transported, and disposed	**Priority population: Occupationally exposed workers** To reduce exposure to hazardous, clinical, and related infectious wastes Intermediate indicator: Number of employers who adhere to National Guidelines for the Management of Clinical and Related Wastes[374] *Baseline: To be derived from State health department data*
To prevent exposure of the population to radioactive waste	**Priority population: The whole population** To prevent exposure to radiation arising from the disposal of radioactive waste Intermediate indicator: To increase the proportion of workplaces which fully comply with codes of practice for disposal of radioactive waste *Baseline: To be derived from National Repository for Radioactive Waste Database*

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
			Work and the workplace (Chemicals Assessment)

373 NHMRC. 1988. *National Guidelines for the Management of Clinical and Related Waste.*

374 NHMRC. 1988. Ibid.

Indoor Environment

In the indoor environment, particularly the domestic environment, sensitive sub-populations including the elderly, frail, and children are potentially exposed to a spectrum of pollutants, including domestic chemicals which are a major source of childhood accidental poisoning.

While reduction of environmental hazards in the home is often related to improved housing design and selection of appliances, a small number of priority contaminants involving volatile organic compounds and particulates arising principally from smoking require positive individual action. Older gas heaters and cooking appliances that are improperly flued or unflued pose potential health risks.

Goal

To improve air quality of the indoor environment

Proposed targets

Priority populations:
The whole population
Pregnant women
Children 0 -11 years
To reduce exposure to volatile organic compounds and particulates in the domestic environment due to smoking
Intermediate indicator: To reduce the proportion of domestic environments where smoking occurs

Priority population: The whole population
To reduce exposure to volatile organic compounds and particulates in the domestic environment due to unflued gas heaters and cooking appliances
Intermediate indicator: To reduce the proportion of households with unflued, or improperly flued, gas heaters and cooking appliances

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury (residential), Asthma	Smoking		

Noise

Noise is a significant problem in the workplace and noise-induced hearing loss is being addressed as one of the six priority areas by the National Occupational Health and Safety Commission (Worksafe Australia). Noise is also a growing problem in urban areas, mainly associated with transport, where trucks transport raw materials and consumer goods. The exhaust systems of large trucks are responsible for the greatest component of highway noise. While the epidemiological studies of the effect of noise on health need to be cautiously interpreted, there is growing evidence that high noise levels disturb sleep patterns, cause hearing impairment, and affect the quality of life.[375]

375 NHMRC. 1992. *Ecologically Sustainable Development: The Health Perspective*. p 68.

Goal:

To reduce exposure to excessive noise levels that are damaging to health

Proposed target

Priority populations:
The whole population
Occupationally exposed workers
To reduce exposure to noise levels that are in excess of recommended levels[376]
Intermediate indicator: To reduce the number of workplaces and residential areas with noise levels in excess of recommended levels
Baseline: To be derived from Local government and State data bases and Worksafe Australia

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Hearing disorders			Transport, Work and the workplace, Housing, home, and community infrastructure

b) Planning for a healthy environment

Need for action

While the link between ecological sustainability and health is becoming better understood, the integration of environmental health issues with planning is not well developed. The elimination of hazards is often outside the control of the health sector, and government as a whole, industry, unions, and community organisations are increasingly working together to address environmental problems at source.

Environmental impact assessments have proven to be useful in addressing environmental issues for designated developments.[377] It is now proposed to build Health Impact Assessments into these, to address the health impact in a more structured way.[378] These assessments will focus on projects' impact on the quality of housing and community environments, and highlight need for adequate and accessible built structures, social and recreational facilities, services, and transport as well as the more traditional public health concerns of safe water, air, and soil quality.

Viable methods for health impact assessment will need to be developed. Data bases of known health impacts, legislation and research will need to be developed and personnel trained to do assessments. Health professionals will need to play a leading role in the community, advocating the need for healthy environments, and promoting environmental health issues.

It is not only new developments that determine environmental health. In many existing communities there is concern about the cummulative effects on health of existing traffic and industrial pollution, storage and movement of dangerous chemicals, quality of food, water, and so on. While national and State strategies to improve environmental quality provide a basic framework for environmental health plans to be developed, there is a further need for regional and local environmental health planning to overcome any problems identified.

376 National Standard on Occupational Noise and National Code of Practice for Noise Management and Protection of hearing at work (in print: Worksafe Australia) and relevant State or Local government legislation, such as the NSW Noise Control Act.

377 Developments where environmental impact assessments are required under planning regulations.

378 Ewan C et al. 1992. Ibid.

Goal

To minimise exposure to health risks associated with inadequate environmental planning

Proposed targets

Priority population: Populations in areas where there are designated developments[379]
To minimise the health impact of new developments.
Intermediate indicator: To increase the number of new developments which have been subject to approved health impact assessment as part of the Environmental Impact Assessment process

Priority population: Population in priority catchment areas[380]
To minimise exposure to environmental conditions which pose a health hazard
Intermediate indicator: To increase public health surveillance systems which monitor environmental health indicators in priority catchment areas

Priority population: The whole population
To minimise exposure to potential environmental health problems
Intermediate Indicator: Increase the number of Local government areas which have adopted comprehensive environmental health plans which make a systematic attempt to protect and improve the public health environment

There is currently no systematic collection of data in this area.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
		Social support	Physical environment, Housing, home, and community infrastructure, Transport

379 Developments where environmental impact assessments are required under planning regulations.

380 Priority Catchment areas have been identified as having high or potentially high levels of pollution for example Murray-Darling Basin, Western Metropolitan Sydney.

4.2 Transport

While the convenience and flexibility of modern forms of transport have allowed greater freedom of movement of people and goods, there has been growing concern about the effects of current modes of transport on the environment and on health – air pollution, traffic congestion, excess noise, transport-related injury, and the loss of bushland being some of these.

Transport, particularly motor-vehicle transport, is seen as contributing significantly to global warming. The recent reports of the Ecologically Sustainable Working Group on Transport and the NHMRC Report on Ecologically Sustainable Development: The Health Perspective[381 382] outline the potential dangers to health and wellbeing if steps are not taken to reduce pollution and ensure that future developments address the need to protect and improve the environment.

Developing transport systems which attempt to protect and promote health will require changes in the way transport infrastructure is currently used, planned, and developed. Transport planning and development needs increasingly to be based on understanding that:

- Health and environmental factors are inter-dependent and should be incorporated into future national planning and decision-making mechanisms, to promote ecologically sustainable development.

- Transport planning in Australia should be undertaken in the context of an integrated land use strategy which seeks to promote and protect the health of the community and ensure equity of access to community infrastructure.

- Transport infrastructure and facilities should promote safer and less polluting modes of transport to minimise risk to individuals and the community.

Reducing the impact of transport-related health problems needs to be undertaken at a number of levels. Table 3 illustrates some of the areas where interventions could impact on the health effects of transport generated injury and pollution. It demonstrates that there are policies that can be developed at several levels, and in different areas which will ultimately affect motor vehicle design, local traffic planning and broad scale policy directions.

These are complex and inter-related issues. For example, more efficient forms of transport, which reduce levels of pollution through reducing congestion, may not necessarily have positive effects on amenity, environment, or safety and may further limit

Table 3: Approaches to Reduce Transport-Related Health Problems

	Design	Local	Broad Scale
Injury	Vehicle safety	Traffic management in residential areas	Safer transport modes
Pollution	Vehicle design and maintenance	Traffic calming	Less polluting transport modes
Accessibility	Design of buses, trains, stations, crossings	Public and community transport	Land use planning

381 NHMRC. 1992. *Ecologically Sustainable Development - The Health Perspective.*

382 Ecologically Sustainable Working Groups. 1991. *Final Report: Transport.* Australian Government Publishing Service, Canberra.. 1991.

the access of groups who are already disadvantaged. Transport planning needs to take into account a broad range of possible impacts on the health and wellbeing of individuals and communities rather than focussing on a single aspect, such as pollution or safety. In the longer term, changes to land use patterns offer potential for the development of human settlements that minimise the risk of harm through transport-generated injury and pollution and improve access to schools, workplaces, health services and other community services and amenities.

Regional approaches to transport planning and development provide opportunities for linking transport and health through examination of local issues as demonstrated by community-based injury control programs in some regions. As expertise and data are gathered, better environmental impact assessments of transport developments can be made, thereby addressing health issues more systematically. Continued commitment to transport planning is not only necessary for the assessment of likely impact before a development, but also to monitor the impact over time.

There is no single national or even State body with a health-oriented remit relating to transport systems. The Council of Transport Ministers, the Department of Transport and Communication, the National Road Transport Commission, and the National Rail Corporation all hold interests in supporting more efficient transport networks. As in other sectors, State transport, road and rail, and local government have operational responsibilities for the development and maintenance of road networks, and public transport systems (bus, rail, ferries, and taxis). The Federal Bureau of Transport Economics and Communications supports a research data base. It is within this institutional framework that issues of transport and health can be most effectively addressed.

This part of the report was developed on the basis of recommendations from a national workshop held in Sydney on 24 July, 1992 and examines transport-related injury, pollution, urban land form, and access to transport. Although the issues are considered separately, strategies for reducing the health problems associated with transportation are generally more integrated than might be implied in the way this chapter is organised. For example, increasing the number of journeys made on public transport would reduce injury and pollution, and may require less land to be utilised for transport purposes.

a) Transport-related Injury

Need for action

Transport accident injuries and fatalities not only represent a cost to individuals in terms of shock, disruption, grief, financial and social disruption, but also a major economic cost to the nation. In 1988 it has been estimated that the social cost of transport-related injury was said to be $6.5 billion. The Injury part of this report deals more directly with the health impact of transport-related injury.

As most transport-related injury is associated with road traffic, attempts to reduce this will need to focus on reducing road use, better roads and traffic management, safer vehicles, and well directed and enforced traffic laws. Personal behaviours are also important determinants of transport-related injury. Speeding, drink-driving, and failing to wear bicycle helmets and seat belts are behaviours which are potentially amenable to change.

Beyond this there are changes to car safety, the way cities are planned, and government policies which can assist in prevention of transport-related injury by increasing safety measures, reducing the number and lengths of trips and encouraging safer modes of transport (for example, public transport).

Goal

To reduce personal risk from transport-related injury

Proposed targets

Priority population: Drivers and passengers of cars and similar vehicles
To increase the proportion of drivers and passengers who travel in cars with improved frontal protection
Intermediate indicator: To increase the proportion of cars fitted with air bags at time of manufacture
Baseline: Standards defined in Australian design rules for occupant protection in passenger cars

Priority population: Drivers and passengers of light commercial vehicles and 4 wheel drive vehicles generally used as passenger vehicles
To increase the proportion of drivers and passengers who travel in light commercial vehicles with frontal protection equivalent to that of cars
Intermediate indicator: To increase the proportion of new light commercial vehicles and 4WD which comply with passenger car design rules
Baseline: Standards defined in Australian design rules for occupant protection in passenger cars

Priority population: Passengers in centre seating positions in passenger cars and similar vehicles
To increase the proportion of passengers in centre seating positions who are adequately restrainedIntermediate indicator: To increase the number of vehicles fitted with 3 point seat belts in the centre seating position at the time of manufacture
Baseline: Standards as defined in Australian design rules for occupant protection in passenger cars

Priority population: Passengers on long distance passenger coaches
To increase the proportion of passengers in long distance coaches who can be adequately restrained
Intermediate indicator: To increase the proportion of coaches fitted with lap sash seat belts
Baseline: To be derived from coach registrations

Priority population: Children, older people, people with disability
To increase the number of residential areas where pedestrians can move safely
Intermediate indicator: To increase the number of local government councils which have introduced traffic calming strategies

Priority population: Children, older people, people with disability
To reduce exposure to dangerous traffic
Intermediate indicator: To reduce origin/destination linkages across heavily trafficked roads that do not have safe crossing facilities

Priority population: Children, older people, people with disability
To reduce exposure to dangers associated with the need to cross busy roads in new developments
Intermediate indicator: To increase the number of new residential developments with transport management plans

Priority population: All cyclists
To increase the proportion who have access to safe cycling routes to employment, shops, or recreational centres
Intermediate indicator: To increase the number of planned non-recreational cycle routes
Baseline: In the absence of more specific data, it has been suggested that the number of State, Territory and local governments adopting the National Bicycle Strategy would provide an indication of commitment to planned non-recreational cycle routes

Priority population: Workforce
To decrease exposure to unsafe traffic conditions associated with journeys to work
Intermediate indicator: To reduce the average length of journey to work
Baseline: Available from various state transport planning studies

Priority population: The whole population
To decrease exposure to injury associated with transport related accidents
Intermediate indicator: To increase the proportion of total journeys made on public transport
Baseline: Available from various state transport planning studies

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury (especially transport related injury)	Safety behaviours		

b) Transport-generated Pollution

Need for action

Transport-generated pollution is an issue of increased community concern not only because of the immediate impact which it may have on health, but also because of the longer term impact on the global environment.

There is growing evidence that exposure to particulate and gaseous emissions can have significant impacts on health, see Table 4. (Note: in many cases these effects appear to be related to exposure and are dose dependent). Community concern over recent reports of high blood lead levels in children and a higher incidence of respiratory illness at times of high particulate emissions are adding to pressure to reduce air pollution, especially in urban areas, and leading to demands to further investigate safe exposure levels.

Gas and particulate emissions, noise, vibration, and energy consumption are the main forms of transport-generated pollution. Motor vehicles are of particular concern because of the large numbers in congested urban areas and overall volume of pollutants which they emit.[380] In Australia, for example, 87% of all urban travel and 65% of all non-urban travel is by motor vehicle with

383 Australian Environment Council. 1985. *Air Emissions Inventories of the Australian Capital Cities*, AEC Report No 2. Australian Government Publishing Service, Canberra.

26% of all carbon dioxide produced in Australia in 1987-88 generated by domestic transport.[384] Cars and light commercial vehicles account for over 60% of carbon dioxide from domestic transport. (Fig 2)

Noise is a growing problem associated with transportation, especially in urban areas.[385] Trucks are being used increasingly to transport raw materials and consumer goods, and the motors and exhausts of large trucks are the largest component of highway noise. Traffic noise is magnified in narrow streets where sound reverberates between the buildings.[386]

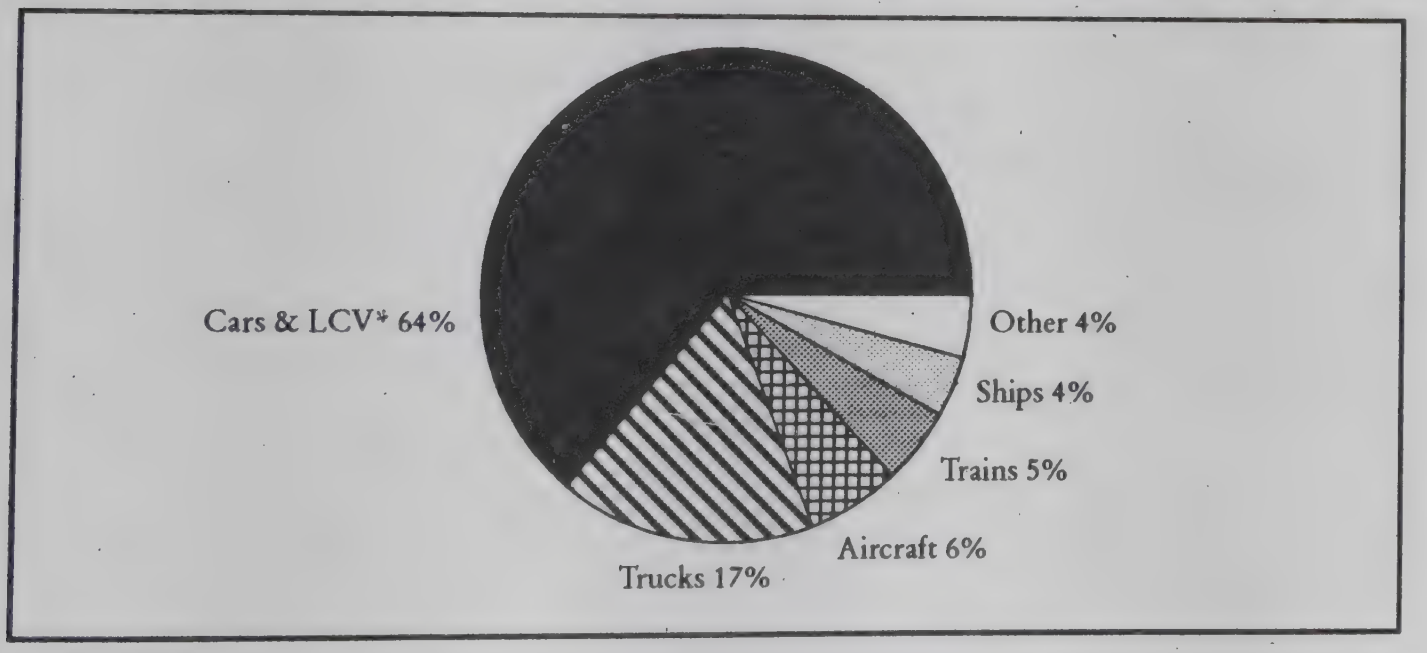
Epidemiological studies of the effect on health of traffic noise need to be cautiously interpreted because of the possibility of bias introduced by confounding variables. However, it has been suggested that chronically ill residents in areas with high traffic volumes may be particularly vulnerable to the effects of noise.[387] Other types of transportation produce noise. Railroad engines, horns and whistles, and the noise of switching and shunting operations in rail yards can affect both railway workers and the neighbouring community. Air traffic also causes problems, and while newer aircraft have become quieter, the need for airports to expand threatens to offset these gains.

There is a clear need to reduce the impact which current transport modes are having on the health of the community through transport-generated pollution. This can be achieved through a range of measures which address issues of pollution and traffic management problems such as traffic congestion and fuel economy.

These measures include:

- reduced use of motor vehicles on an individual and population basis;
- improved flow of traffic resulting in lower emissions generated by stop/start driving;
- increased use of safer and less polluting forms of transport per person trip by encouraging greater use of public transport, cycling and walking;

Figure 2: Estimated Australian Carbon Dioxide Emissions From Domestic Transport 1987-88 [388]



* of which 54% cars

Note: Total emmissions: 73 megatonnes of carbon dioxide

384 Bureau of Transport Economics. 1991. *Greenhouse Gas Emissions in Australian Transport*, Working Paper 1. BTCE, Canberra.

385 NHMRC. 1992. *Ecologically Sustainable Development: The Health Perspective*. p 63.

386 Suter, AH. 1990. *Noise in the environment: a background paper* World Health Organization Report on Health and the Environment, Geneva

387 Dunt, DR et al. 1989. *Western Bypass Feasibility Study*. VICROADS. Melbourne.

388 Ecologically Sustainable Development Working Groups. 1991. *Final Report - Transport*. Australian Government Publishing Service, Canberra. p 13.

- improved fuel quality to lower emissions and improve economy;
- reduced levels of vehicle emissions and fuel economy through use of improved technology at time of manufacture and by regular maintenance; and
- increased use of coastal shipping and rail to move goods, thereby reducing pollution and improving traffic flow.

To introduce these measures will involve not only change in personal behaviour, for example, the use of public transport, maintenance of vehicles, but will also need better traffic management, reduction in the length and time of trips, and increased use of less polluting modes of transport. It is worth re-emphasising that measures to reduce pollution may also assist in reducing transport-related injury.

Table 4: Transport-generated Pollutants and their Effect on Health

Tropospheric Ozone	Eye irritation, cough & chest disorders, headaches, nausea and upper respiratory illness
Carbon Monoxide	Impedes oxygen transport in the blood. Places people with weak hearts under additional strain. Foetuses, people suffering from sickle cell anaemia and young children may be especially susceptible
Oxides of Nitrogen	Increased susceptibility to respiratory infection, increased airway resistance in asthmatics and decreased pulmonary function. Short term exposure of children in schools has resulted in coughs, running noses and sore throats
Lead	Damages central nervous system. Children may develop behavioural problems, lower IQs and decreased ability to concentrate. At 80-100 ug/dL may cause intestinal distress, kidney damage and brain damage. At lower levels of 30-60 ug/dL may decrease haemoglobin synthesis disturb kidney and reproductive functions, and cause peripheral nerve abnormalities
Particulates	May cause cancer and may increase mortality and morbidity from respiratory disease
Aldehydes	Formaldehyde is a suspected carcinogen and can produce short-term respiratory and skin irritation especially in sensitive individuals
Benzene	Causes skin, eye and upper respiratory tract irritation, headaches, dizziness, depression and nausea
Asbestos	Causes cancer, asbestosis, and mesothelioma

Derived from: NHMRC. 1992. *Ecologically Sustainable Development: The Health Perspective.*
(Note: All these effects are dose dependent)

Goal:

To reduce transport-generated pollution

Proposed targets

Priority population: The whole population
To reduce exposure to pollution generated by vehicles that do not meet noise and gaseous emission standards
Intermediate indicator: To increase the number of vehicles that meet noise and gaseous emissions standards
Baseline: NSW EPA Study

Priority population: The whole population
To reduce ambient exposure to lead
Intermediate indicator: To increase the proportion of cars using unleaded petrol
Baseline: To be derived from car registrations

Priority population: The whole population
To reduce exposure to transport-generated pollution due to reliance on fossil fuels
Intermediate indicator: To increase the number of vehicle fleet operators who use alternate fuel supplies (for example, LPG)

Priority population: The whole population
To reduce exposure to transport-generated pollution due to use of private motor vehicles
Intermediate indicator: To increase the vehicle occupancy rate of private vehicles on private trips

Priority population: The whole population
To reduce exposure to transport-generated pollution in residential areas
Intermediate indicator: To increase the number of local government areas using traffic calming strategies to improve local amenity

Priority population: Population travelling to Central Business Districts (CBDs)
To reduce exposure to transport-generated pollution in CBDs
Intermediate indicator: To increase the proportion of people travelling to the CBDs who use public transport
Baseline: Figures from ESD Transport Working Group. Percent of workers now using public transport: Sydney 29.5%, Melbourne 20.6%, Brisbane 16.6%, Adelaide 16.5%, Perth 12%

Priority population: The whole population
To reduce exposure to transport-generated pollution
Intermediate indicator: To increase the proportion of people using less polluting modes of transport (public transport, walking, cycling) instead of private motor vehicles

Priority population: The whole population
To reduce exposure to transport-generated pollution due to freight movement by road
Intermediate Indicator: To decrease the proportion of interurban land transport of freight
Baseline: 1987-88: 40% of interurban land transport of freight by road (ESD Transport Working Group)

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Asthma			Air quality

c) Urban Land Use Form - Accessibility of Appropriate, Less Polluting Transport Modes

Need for action

The high costs of developing infrastructure, isolation from employment and educational opportunities, and problems of access to shops, health and welfare services in outer metropolitan areas in capital cities emphasise the need to integrate transport and land use planning. However it is not only in urban areas that problems are being experienced. Tourist and coastal retirement centres are experiencing large population growth without the development of a transport and community services infrastructure. Locational disadvantage is increasingly seen to have an impact on health. While the exact mechanisms are still unclear there is growing support for the view that where people live can affect their health, independent of age, gender, ethnicity, and socioeconomic status.[389]

Travel demands can be affected substantially by urban design. The ways in which cities and towns are planned affects the distance and time it takes people to reach work, shops and services, and the type of transport used.[390] Higher residential density, a greater mix of land use, and the establishment of urban villages and sub-centres of high population and employment density have been proposed as strategies for reducing travel demand and increasing the use of less polluting forms of transport.

There is a close relationship between urban density and transport demand (see Table 5). Increased density is seen as allowing maximum use of community services, reducing travel demand, and ultimately reducing levels of pollution. Similarly increased land use mix, development of urban villages and so on are seen as ways decreasing travel demand, and promoting less polluting transport modes. However, unless increased density is carefully planned to ensure opportunities for employment, recreation, shops, services and community networks, any possible health benefits may be compromised.

Although on a whole population basis the focus of concern about transport is to reduce the use of motor vehicle transport, there are a number of groups who need improved access to transport. They need public transport which is regular, reliable, and affordable in order to access health and community services.

Income is a powerful determinant of access to transport, especially car ownership, and for low income households without access to a car the proportion of total household expenditure on transport is more likely to be greater than for higher income households. Proposals for the development of ecologically sustainable transport systems need to be sensitive to the disproportionate impact on low income groups which policies may have, for example, raising the cost of fuel without increasing access to public transport.

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389 For further discussion see Community Infra-structure in Housing, Home and Community Infrastructure. Part 2.4.3 of this report.

390 Ecologically Sustainable Development. Transport Working Group Report. p 85.

Table 5: Transport Patterns in Major World Cities, 1980 [393]

	Petrol use litres per capita per annum	Car ownership per 1000 people	Urban density (persons/ hectare)	% of workers using public transport	% of workers on foot or bicycle
US average[a]	58.5	533	14	11.8	5.3
Perth	32.6	475	11	12.0	4.0
Brisbane	30.7	458	10	16.6	5.3
Melbourne	29.1	446	13	20.6	5.7
Adelaide	28.8	475	16	16.5	5.8
Sydney	28.0	412	18	29.5	5.4
Paris	14.1	338	48	39.8	23.8
London	12.1	288	56	39.0	23.0
European Average	13.3	328	54	34.5	21.3
Tokyo	8.5	158	160	59.0	24.9

[a] Average of group of 12 major cities

Women are more likely than men to use public transport and many women are dependent on public transport as their sole means of transport. However, their use is limited by a number of factors. Women are more likely to travel outside peak hour and within the local area to visit health services. Public transport tends not to serve these times and areas well.[394]

Poor design makes the use of public transport very difficult for women with young children, the aged and people with disability. Stairs at stations and footbridges, lack of safe crossings at bus stops on busy streets, and difficulties in getting in and out of buses, are major difficulties for these groups. Although the direct health effects may be minimal, common sense suggests the longer term impacts of social isolation, lack of access to services and reduced access to lower-priced healthy foods, goods, and services are considerable.

Many communities are isolated from affordable and accessible transport services. These include rural communities where the cost of fuel for travel to the nearest commercial centre is high so that trips need to be kept to a minimum; people living in newly developed housing estates with poor public transport; and people living between public transport routes without any way of reaching them. Community bus services are one strategy to address these transport needs.

Access to health care by affordable and reliable transport is a fundamental issue in all communities. This is especially important in rural communities, where there may be few primary health care providers and the community is dependent on occasional visits or must travel to the other areas to access health services. Access to other types of health services, for example physiotherapy, diagnostic services, and specialist services may also be limited. It is often impossible to provide many of these services close to where people live and innovative ways need to be found to improve access to such services.

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393 Newman K and Kenworthy T. 1989. *Cities and Automobile Dependence: An International Source Book*. Gower, Aldershot. England.

394 Lang J. 1992. Women on the Move In: *NRMA Publication: Move.* No 5.

Goal:

To increase access to appropriate, less polluting forms of transport

Proposed targets

Priority populations:
Older people and people with disability
Persons travelling with young children
To increase the proportion of people who can easily get on and off public transport
Intermediate indicator: To improve or modify the design of buses, trains, crossings and stations to make them more accessible

Priority populations:
Older people
People with disability who are unable to use public transport
To increase the proportion of people who are able to access the services they need for independent living,for example, shopping, health services, recreation
Intermediate indicator: To increase the number of local government areas that are covered by a range of appropriate para-transit services (for example, user-generated transport by taxi, special purpose buses)

Priority population: Transport isolated communities[395]
To increase the proportion of residents who have access to transport to access health and welfare services, shops, employment and educational opportunities and so on
Intermediate indicator: To increase the number of community transport services in transport isolated communities

Priority population: The whole population
To increase the proportion of people who have access to hospitals and other health care facilities by regular public transport services
Intermediate Indicator: To increase the proportion of hospitals and other health care settings accessible from major public transport routes

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1 (especially cervical and breast screening)	Diet and nutrition, Physical activity, Contraception and family planning	Social support	Housing, Home, and community infrastructure

395 Transport isolated communities are communities where there is no public transport system and are most usually found in rural areas but can be in newly established residential areas, or in established areas situated between existing public transport routes.

4.3 Housing, Home, and Community Infrastructure

The National Housing Strategy, which has recently been completed by the Department of Health, Housing and Community Services, has outlined the need for housing to be safe, secure, affordable and appropriate.[396] The concept of housing is being extended to include not only the physical structure but also the social and psychological environment in which many people spend their lives. This is especially true for older and disabled people, unemployed and women at home with young children.

This concept highlights the need for housing not only to be seen as physical structures which may cause ill health through overcrowding or injury but also as determining social contacts, access to health and welfare services, shops, transport, employment, education and recreational opportunities,[397] all of which in turn may be associated with health outcomes.

Housing not only provides shelter but also privacy, security, and a base from which the household members can operate, and as a member of a neighbourhood or community helps give them a sense of identity and place. There is evidence that housing, seen in this way, is a resource for health.[398] The importance of social contacts, formal and informal social networks, and familiarity with local surroundings is associated with positive health status.[399]

The safety, adequacy, affordability, and appropriateness of housing is not the responsibility of any one department or level of government. The Commonwealth Department of Health, Housing and Community Services, Aboriginal and Torres Strait Islander Commission, State housing authorities and local government are among the range of government bodies which contribute to the development of Australia's housing stock. Departments of environment & planning, water, sewage and electrical authorities, and those providing home care programs and other social support services are among the many government and community sectors involved in developing community infrastructure. The private sector plays a major role in the development of materials, building designs, estates, and shopping complexes, and needs to be involved in any discussions on housing development.

This part of the report was developed after discussion and/or consultation with officers of the National Housing Strategy, Department of Health, Housing and Community Services (Housing and Urban Development, Home and Community Care and Supported Accommodation Sections), Australian Council of Social Services, NSW Tenants Union, Shelter, Uniting Church of Australia, NSW Mental Health Tribunal, and advice from health professionals interested in this subject.

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396 The National Housing Strategy. 1991 *Australian Housing: the Demographic, Economic and Social Environment.* Australian Government Publishing Service, Canberra

397 Social Justice Strategy. 1992 *Project Report on the Local Area Research Studies on Locational Disadvantage.* Department of Health Housing and Community Services.

398 Chavis D M and Florin P. 1991. Nurturing Grassroots Initiatives for Health and Housing. *Bull NY Acad Med.* 66(5):558-571.

399 Kasl S. 1972. Physical and mental effects of involuntary relocation and institutionalization on the elderly - a review. *American Journal of Public Health* 62(3): 377-384.

a) Safe Housing

Need for action

For housing to be safe it needs to be structurally sound, properly designed, and to provide safety features to prevent commonly occurring accidents and injuries. It also needs to provide an indoor environment which protects household members from the hazardous effects of poor air quality, temperature, noise and lighting.

In Australia housing is associated with injury especially for children and older people. Domestic falls, scalds and burns, drowning, poisoning, and fires have considerable impact on national mortality and morbidity. As the working environment for many women, there is also concern at the level of exposure to domestic chemical substances, and frequency of burns and scalds and other work-related injuries.

The issue of indoor pollution has been identified by the NHMRC Public Health Committee as an area requiring investigation in Australia. The impact of exposure at home to passive smoking, unflued gas heaters, electro-magnetic radiation, soil contamination, lead, fumes from building materials, furniture and paints is coming under increasing scrutiny as evidence mounts of their possible impacts on health.

It needs to be acknowledged, too, that violence and abuse towards women and children in the home causes significant injury and distress as has been highlighted in the Burdekin Report [400] and the National Committee on Violence.[401]

Goal

To reduce injury occurring at home

Proposed target

Priority population: Children under 5
To reduce exposure to unfenced backyard pools
Intermediate indicator: To increase the number of pools with approved safety fences
Baseline: States/Territories requiring separation of domestic pools from houses

Priority populations:
The whole population
Purchasers of new residences
Tenants of public housing stock
To minimise harm from household fires
Intermediate indicator: To increase the proportion of houses equipped with smoke detectors
Baseline: ABS Survey of Household Safety, September 1992

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury (residential), Interpersonal violence		Health literacy	Air quality

400 *Report of the National Inquiry into Homeless Children*. 1989. Human Rights and Equal Opportunities Commission. Australian Government Publishing Service, Canberra.

401 National Committee on Violence. 1991. *Violence: directions for Australia*. Australian Institute of Criminology, Canberra. p33.

b) Adequate Housing

Need for action

The physical standard of housing has been associated with health problems. The need for adequate housing is supported by considerable evidence of the relationship between housing standards and specific health problems.[402] [403] For example, mould and damp have been associated with respiratory symptoms in children,[404] poor quality bathing and washing facilities with trachoma and skin infections,[405] and mental illness with poor housing design.[406]

Although the basic housing stock in Australia is reported to be good,[407] a number of groups in Australia have been identified as having lack of access to even basic standards of housing. Many Aboriginal and Torres Strait Islander communities are living in housing which has no running water, electricity, bathing and laundry facilities or sewer. People with low incomes, living in private rental accommodation, older people and people with disability (especially psychiatric disability) living in rooming or boarding houses or private hotels, and people living in rural communities, often find themselves living in inadequate housing.

Housing can become inadequate if support services are not there to assist with living. Although older people are most affected, for other groups such as Aboriginals and Torres Strait Islanders and people on low incomes, maintenance of housing presents problems for those who may no longer be able to repair their homes themselves or afford someone to adapt or repair them. This can lead to injury or the inability to function in their homes, and may unnecessarily lead to older people being hospitalised or placed in nursing homes.

Goal	Proposed targets
To increase the proportion of people living in adequate housing [408]	**Priority population: Aboriginals and Torres Strait Islanders in rural communities and settlements** To reduce exposure to risks to health associated with poor living conditions Intermediate indicator: To increase the proportion of Aboriginal and Torres Strait Islanders living in remote and rural communities who live in dwellings which have: • potable water for drinking/cooking; • adequate water supply; • electricity; • bathing and laundry facilities; • sewage; • waste disposal; and • adequate drainage *Baseline: To be derived from ATSIC Study into Housing and Community Infrastructure*

402 World Health Organization. 1974. *Uses of epidemiology in Housing Programmes and the planning of Human Settlement*. Technical Review Series No 544. WHO, Geneva.

403 World Health Organization. 1989. *Health Principles of Housing*. WHO, Geneva.

404 Martin CJ et al. 1987. Housing conditions and ill health. *British Medical Journal* 294: 1125-27

405 *National Trachoma and Eye Program Report*. 1980. Royal Australian College of Ophthalmologists. ISBN 0 9594785.

406 Lowry S. 1990. Housing and Health: Families and Flats. *British Medical Journal* 300: 245-247

407 The National Housing Strategy. 1991. *Australian Housing: the Demographic, Economic and Social Environments*. Australian Government Publishing Service, Canberra.

408 Definitions of adequate housing will vary from group to group within the community.

Priority population: Aboriginals and Torres Strait Islanders in urban areas
To reduce exposure to risks to health associated with poor living conditions
Intermediate indicator: To increase the number of Aboriginals and Torres Strait Islanders living in urban settings who live in houses which have:

- potable water for drinking/cooking;
- adequate water supply;
- electricity;
- bathing and laundry facilities;
- sewage;
- waste disposal; and
- adequate drainage

Baseline: To be derived from ATSIC Study into Housing and Community Infrastructure

Priority population: Aboriginals and Torres Strait Islanders
To reduce exposure to health risks associated with poorly maintained housing
Intermediate indicator: To increase the proportion of Aboriginals and Torres Strait Islanders who have access to affordable home maintenance services
Baseline: To be derived from ATSIC Study into Housing and Community Infrastructure

Priority population: Low-income private tenants
To reduce exposure to health risks associated with poor living conditions
Intermediate indicator: To reduce the proportion of low-income tenants living in sub-standard accommodation[409]
Baseline: To be derived from ABS Housing Survey in 1994

Priority population: Residents of isolated rural communities
To reduce exposure to risks to health associated with poor living conditions
Intermediate indicator: To reduce the proportion of people in isolated rural areas living in sub-standard accommodation
Baseline: To be derived from ABS Housing Survey in 1994

Priority populations: Older people and people with disability
To reduce the proportion of injury and illness associated with poorly maintained housing.
Intermediate indicator: To increase the proportion of older people and people with disability with access to affordable home maintenance services.
Baseline: To be derived from Home and Community Care Program: The number of local government areas covered by home maintenance services

409 e.g.. housing which fails to meet the standards and guidelines as set out in the building code of Australia (BCA) on matters such as damp and weatherproofing, sanitary and other facilities, room sizes, light and ventilation, noise transmission and insulation.

Priority population: Older people and people with disability living in boarding houses, private hotels and rooming houses
To reduce exposure to risks to health associated with poor living conditions
Intermediate indicator: To increase the proportion of boarding houses, private hotels, and rooming houses which meet local government regulations

Cross reference targets,

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Injury (residential), Communicable disease, Asthma, Mental health problems and disorders		Social support	

Homelessness presents the most acute form of housing problem and is associated with increased mortality and morbidity from exposure, trauma, infectious, and chronic disease, and chronic mental illness.[410] In Australia there are estimated to be 40,000 people with no secure housing or sleeping out of doors.[411]

The homeless are not a homogeneous group (See Table 6) and are made up of women with their children, and young people staying in refuges, men (who may have alcohol or psychiatric problems) in hostels, and the many people sleeping outdoors or moving week to week between pubs, rooming houses, and caravan parks. The causes of homelessness are complex and there is need for a range of medium and long term accommodation as a significant part of any solution.

Table 6: National One-Night Census of Supported Accommodation Assistance Program Users (SAAP) May 1991

Youth	2,267
Women and children escaping domestic violence	2,238
Families	1,932
Single women and children	364
Single men over 18	2,316
Multiple categories	2,010
Total	11,127

Source: Department of Health, Housing and Community Services.

410 Darnton-Hill I et al. 1990 .Socio-Demographic and Health factors in the well being of homeless men in Sydney, Australia. *Social Science and Medicine*. 31(5): 537-544.

411 Coopers and Lybrand WD Scott. 1985. *Study into homelessness and inadequate housing*. Vol 1. Department of Housing and Construction, Australian Government Publishing Service, Canberra.

Goal:

To reduce the health impact of homelessness

Proposed targets

Priority population: All homeless people
To reduce the number of homeless people
Intermediate Indicator: To increase the proportion of homeless people with access to medium, and long term accommodation and appropriate support services in each State/Territory
Baseline: To be derived from the proportion of emergency, medium, and long term accommodation funded by the Supported Accommodation Assistance Program

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Mental health problems and disorders, Interpersonal violence			

c) Secure and Affordable Housing

Need for action

The Aboriginal and Torres Strait Islander, and Children and Youth Health Goals and Targets have identified housing as important in the promotion and protection of health. This has recently been supported by the National Health Strategy's Research Paper on the effect of income and environment on health.[412] Without a secure base from which to operate it is difficult for household members to plan their lives, for children to be settled into school and social networks to be established. As the people who find themselves in these situations often have other problems (disability, low income, chronic medical problems) their level of disadvantage is compounded by the lack of secure and affordable housing.

In 1988 Australian households as a whole spent 12.6% of their incomes in housing costs. However, among people with the lowest incomes, 763,000 housing units spent 25% of their income on housing and 476,000 were spending 30% of their income on housing costs.[413]

The three groups of people with over half their number facing the highest housing costs (as a proportion of income) were :

- Private renters who comprise 20% of all income units, but almost 60% of those in housing stress;[414]

- Recipients of social security payments who comprise 28% of all income units, but over 60% of those defined as being in housing stress;

- Single people without dependents who comprise one third of all income units, but 53% of those in housing stress.

Access to public housing or outright ownership of their own homes protects many lower income units from housing

412 National Health Strategy. 1992. *Enough to make you sick. How income and environment affect health.* Research Paper No 1. National Health Strategy, Melbourne. p. 103.

413 The National Housing Strategy. 1992. *The Affordability of Australian Housing.* Australian Government Publishing Service, Canberra.

414 Housing stress as defined by the National Housing Strategy as household income units in the lowest 40% of the income distribution range spending more than 30% of their income on housing. Housing income units are defined as a single person or group of people who live together and are expected to share expenditure.

stress. It is therefore not surprising that national waiting lists for public housing are estimated to be around 200,000.

The disadvantage faced by many groups, including NESB people, is further compounded by their lack of knowledge of their legal rights as renters, and where to turn when they are in difficulty.

During times of recession, less affluent sections of the community may lose their capacity to maintain mortgage repayments, or pay the high levels of rent in the private rental market. This often leads people to look at alternate forms of accommodation, moving in with relatives or going to caravan parks. In Blacktown, in Western Sydney, 6% of the population now live in caravans, a significant rise having occurred during the recent economic recession. Previously this was an area with a high proportion of people paying off their homes.

Goal

To increase the proportion of the population with access to affordable housing

Proposed target

Priority population: Low socioeconomic households
To reduce the health impact of high housing costs
Intermediate indicator: To reduce the proportion of households experiencing housing stress
Baseline: ABS 1988 Australian Housing Survey

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
		Social support	

d) Appropriate Housing

Need for action

The type of housing which is most appropriate changes through occupants' life stage and functional status. As housing represents not only a physical structure but also the setting for complex social and psychological relationships, it is important that all these factors are taken into account when looking at the ability of residents to continue to live in their home environment, or assessing what would be the most appropriate type of housing for a person whose functioning is so limited that some form of supported accommodation is required.

The housing of people with diminished health status, disability or social functioning is of particular concern when looking at the relationship between housing and health. Any attempt to rehabilitate people and have them live at their highest level of functioning pre-supposes that they have adequate housing which is, or has been modified to be, appropriate to their needs, and allows them access to social support and community services.

However, it may be that people eventually need access to accommodation which offers them special support. The type and level of support will vary but it is important that the rights of the residents to privacy and a decent standard of care are met. The type of accommodation that may be appropriate varies from integrated retirement villages, hostels for the aged, boarding houses for people with psychiatric disability, group homes for the developmentally disabled, through to nursing homes.

Goal	Proposed targets
To ensure that people with diminished health status, disability or social functioning, are able to live at home as independently as possible	**Priority population: Older people 60 years or more** To increase the proportion who have access to housing that enables them to live independently Intermediate indicator: To increase the range of housing options available to older people **Priority population: People with diminished health status, disability or social functioning** To increase the proportion who are able to live as independently as possible in their own homes Intermediate indicator: To increase the proportion of people living in housing which has been modified to meet their needs

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Mental health problems and disorders, Musculoskeletal disorders, Sight disorders		Social support	Transport

e) Community Infrastructure

Need for action

The location of housing itself determines household members' access to health and welfare services, transport, employment, education, and recreational opportunities.[415] The National Health Strategy[416] and the Australian Institute of Health and Welfare's report on Australia's Health 1992[417] have identified housing location (metropolitan and non-metropolitan) as determining health outcomes independent of socioeconomic status, age, gender, and ethnicity. The differences in health status by local government area (as demonstrated in the recently published Australian Social Health Atlas)[418] illustrate further the relationship between housing location and health status.

The practice of locating large numbers of people who may already be significantly disadvantaged, such as sole parents and people with low incomes, in areas of locational disadvantage compounds their problems. Although locational disadvantage is usually a problem of metropolitan urban fringes, it also occurs in expanding retirement and tourist areas and in declining inner urban and rural areas.

The demographic structure of areas changes over time, too, for example, as the population ages, as areas become more fashionable, or different ethnic groups move in and out. Regular updated plans which identify changing health needs provide an important framework for the development of appropriate health infrastructure.

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415 The National Housing Strategy. 1992. *Housing location and access to services.* Australian Government Printing Service, Canberra.

416 The National Health Strategy. 1992. *Enough to make you sick: How income and environment affect health.* Research Paper Np. 1. National Health Strategy, Melbourne.

417 Australian Institute of Health. *Australia's Health 1992.* Australian Government Printing Service, Canberra.

418 Glover J & Wollacott T. 1992. *A Social Health Atlas of Australia.* Vol 1. Australian Bureau of Statistics. Catalogue No 4385.0.

Housing location determines exposure to pollutants and hazards, such as transport-generated pollution, and determines how easily people can access their support networks and community infrastructure.

There is need, therefore, for all new residential developments to be related to transport, employment, education, recreation and basic health and welfare services. Effective action in addressing health-related housing problems will require active inter-sectoral co-operation not only between levels of government, but also collaboration with community groups and the private sector.

Current housing development patterns in Australia with declining inner urban and rural areas and rapidly expanding populations on urban fringes and coastal strips is focusing attention on the complexity of planning healthy human settlements, and the high social and economic costs of providing infrastructure Understanding and planning for these complex physical and social relationships is important not only in promoting and protecting the health of this generation, but also in developing patterns of human settlement which are economically and ecologically sustainable.

Goal

To reduce the health impact of locational disadvantage

Proposed targets

Priority population: Residents of newly developed residential areas
To reduce the impact on health of locational disadvantage
Intermediate indicator: To increase the number of newly established residential areas which link the provision of appropriate, safe, secure, and affordable housing to access to employment, educational and recreational opportunities, transport, health and welfare services

Priority population: The whole population
To increase the proportion of people living in areas with access to health and welfare services appropriate to their needs
Intermediate indicator: To increase the number of local government areas which are covered by strategic health plans which are substantially reviewed every five years

Priority population: Residents of rural and remote areas
To increase the proportion of residents of isolated rural areas with access to basic health and welfare services
Intermediate indicator: To increase the number of local government and non-incorporated areas covered by strategic health plans

Goal:

To ensure physical access to community services and infrastructure

Proposed targets

Priority populations:
Older people
People with disability
People with small children
To increase the proportion of people who can access community services and infra-structure
Intermediate Indicator: To increase the proportion of community services and infra-structure which has been designed or modified to enable physical access

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1 (especially Maternal and infant mortality and morbidity, Mental health problems and disorders)	Chapter 2.2 (especially Food and nutrition, Physical activity)	Social support	Transport, Work and the workplace, Schools

4 Work and the Workplace

Occupational injury remains a significant cause of premature mortality and disability. Minimising exposure to unsafe work practices, and to potentially toxic products in the work environment is a long established aspect of public health protection. Changes in technology combined with improvements in occupational safety generally mean that fewer workers are exposed to occupational hazards. However, continued vigilance is necessary as new chemicals and procedures are introduced to the workplace. Different patterns of work-related injury and ill health have emerged to replace past problems in the last few decades. For example, back injury and repetitive strain injury are major causes of workers' compensation claims and lost working time.

In Australia, health and safety at work is managed as part of the industrial sector. The national lead agency is Worksafe Australia (the corporate title for the National Occupational Health and Safety Commission - NOHSC). Worksafe has responsibility for developing standards, national model regulations and codes of practice which are then utilised by the States and Commonwealth regulatory authorities. Worksafe also develops prevention strategies and offers advice on developing healthy and safe work environments, and reducing the incidence and severity of occupational injury and disease.

The NOHSC is a tri-partite body, comprising representatives from the States/ Territories/Commonwealth, the Australian Chamber of Commerce and Industry (ACCI) and the ACTU. Similar tri-partite arrangements are found in the State bodies, which have responsibilities for regulation and implementation, through enforcement and education.

Although practices vary across States and enterprises, individual legislative provision is made for participation and training in workplace decision-making about health and safety issues. These specialised areas are integrated into the consultative arrangements that are developing through structural efficiency and workplace reforms.

On radiation health for workers, the NOHSC and the NHMRC are collaborating on the development of national occupational health radiation exposure standards. Following endorsement by both NOHSC and the NHMRC, these standards will be available for adoption by appropriate State and Territory authorities.

While the responsibility for safety and protection of the workforce is clear, the place of health promotion in the workplace is less well-defined. Trade unions in the past have expressed concern that workplace health promotion (WHP) would subsume occupational health and safety (OHS) and that gains which have been made in the area of OHS could be undermined.

By focusing on individual behavioural change there was concern that WHP could substitute for action in broader safety issues.[419] Employers, too, have needed to be convinced that it is in their best interest to participate in WHP activities. Recent developments in WHP have seen greater concern for comprehensive strategies that deal not only with individual behavioural change but also acknowledge the importance of environmental intervention.[420]

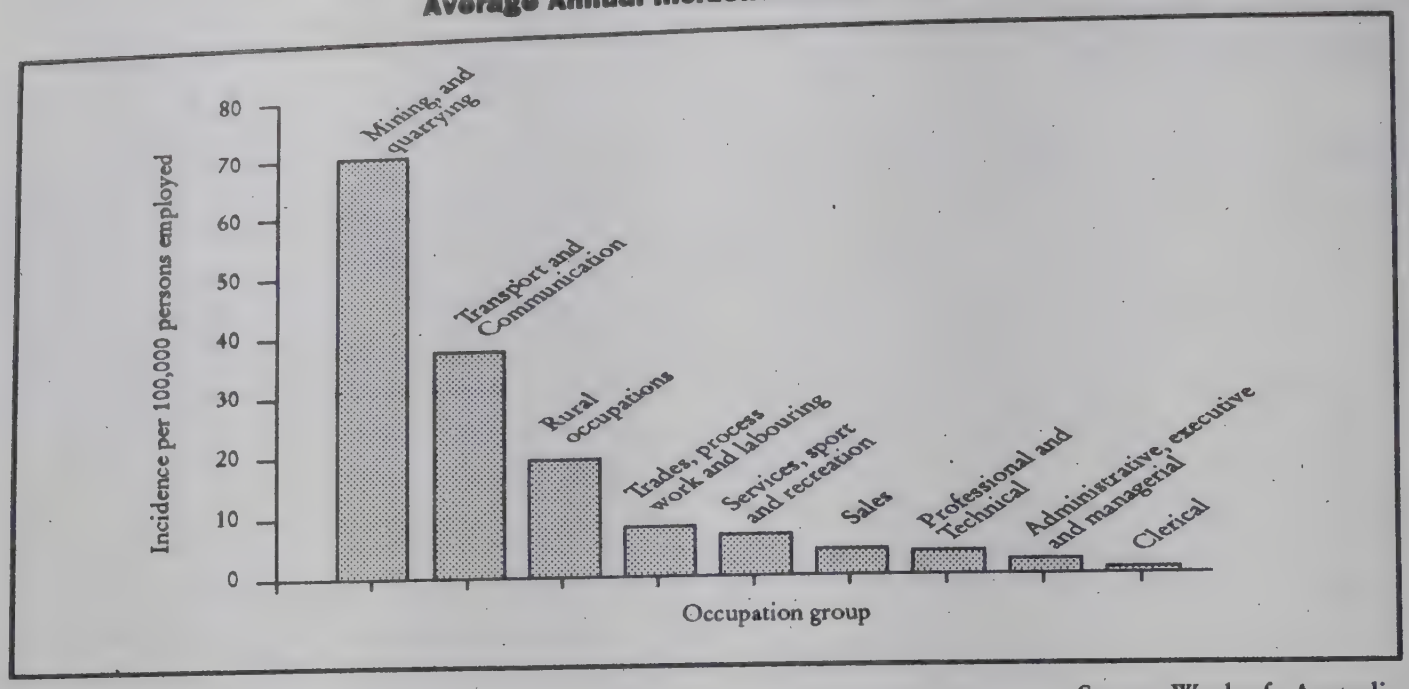
The risks to health in the workplace are not equally shared, see Table 7, with workers in some industries and some population groups bearing a disproportionate health burden. The NESB Women's Health Strategy[421] has highlighted many of the problems faced by

419 Chu C and Forrester CA. 1992. *Workplace Health Promotion in Queensland.* Queensland Health.

420 Edited by Federal Centre for Health Education in collaboration with WHO Regional Office for Europe. 1989. *Health Promotion in the Working World.* Springer-Verlag. Germany.

421 Alcorso C and Schofield T. 1991. The National Non-English Speaking Women's Health Strategy. Australian Government Printing Service, Canberra. p 74.

Table 7: Traumatic Work-Related Fatalities, Australia. Average Annual Incidence 1982 - 1984



Source: Worksafe Australia

this group in the workplace, and their increased risk of injury. The incidence of women with compensable injuries is reported to be rising, and as more women enter the workforce this trend is likely to continue. Out-workers, rural workers, and employees in very small, unstructured businesses are seen as being particularly vulnerable as it is difficult to ensure that OHS standards are met.

Although there are risks to health associated with work, there is also consistent and growing evidence of the effects of unemployment on health.[422] [423] Increasing numbers of studies are showing that even after adjusting for social class, age, and prior illness or disability the death rates of unemployed men and their wives is significantly higher than expected. There is also concern at the impact of unemployment on young people.[424]

This part of the report focuses mainly on paid employment but it is recognised that there is much unpaid work being undertaken in the community. Recent reports on women's health have expressed concern about the illness and injury arising from work at home as well as in the workplace.[425] Women continue to take the main responsibility for domestic tasks and, as carers of children, the aged and disabled, have been identified as one group who make significant unpaid contributions to the community.

As more women enter the workforce there is potential conflict between these dual roles. The need to develop workplaces which are sympathetic to work and family responsibilities is becoming an area of increased government and corporate interest. Flexible work hours, provision of child care, and information on the availability of services are increasingly part of human resource management within public and private corporations. These initiatives are seen as providing tangible social support to protect health and promote wellbeing.

This part of the report was developed from recommendations of a national workshop held in Melbourne on 17 July, 1992 and from discussions with Worksafe Australia (re Section on Occupational Health and Safety).

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422 Kerr CB. 1983. Does unemployment cause ill health? *New Doctor/ Social Welfare: Impact/Jnl Social Alternatives Joint Issue.* Sept-Oct.3-8.

423 Webster I. 1984. Health Costs of Unemployment. *Mental Health in Australia.* 1(12): 17-23.

424 Halford WK and Learner E. 1984.Correlates of coping with unemployment in young Australians. *Australian Psychology.* 19(3): 333-344.

425 Commonwealth Department of Community Services and Health. 1989. *National Women's Health Policy.* Australian Government Publishing Service, Canberra. p 48.

a) Occupational Health and Safety

Need for action

National approaches to occupational health and safety are set through the tripartite National Occupational Health and Safety Commission (NOHSC) whose mission is:

> to lead national efforts to provide healthy and safe working environments, and to reduce the incidence and severity of occupational injury and disease.[426]

Work-related injury, disease, and death remain significant in health and economic terms as the following statistics demonstrate:

- In 1989-90 in Australia there were 198,000 compensated injury and disease cases requiring 5 or more days off work;
- In 1990-91 workers' compensation claims for occupational injury and disease totalled $5 billion;
- In 1990-91 the estimated total (direct and indirect) cost of injuries and disease was over $10 billion.[427]

To optimise the achievements at the national level, the NOHSC has identified the following three urgent priorities for 1992 to 1995:

- the achievement of national uniformity of OHS standards;
- improved industry OHS performance, especially in industries critical to Australia's economic well-being; and
- the need for research which is responsive to industry OHS needs.

Over the past decade Australia has experienced major growth in activity in the OHS field. New legislation has been passed by Commonwealth, State and Territory governments, supported by standards development and hazard-specific strategies and programs. However, OHS performance in Australian industry remains uneven, and particularly poor in some industries central to Australia's economic well-being. For those industries, poor OHS still means a high incidence and severity of injury and diseases and high costs.

The NOHSC has previously identified six priority hazard areas for particular attention:

- occupational back pain;
- noise-induced hearing loss;
- management of chemicals;
- occupational skin disorders;
- occupational cancer; and
- mechanical equipment injury.

In five of these areas[428] prevention has been supported by the development of appropriate control documents, for example, national model regulations, standards, and codes of practice, and national strategy documents which set out co-ordinated action necessary to assess and prevent injury, for all workers exposed to the particular hazards. The national approach to OHS will be formulating industry-specific strategies to further improve the OHS performance in selected national industries with high incidence, severity and costs of occupational injury and disease.

OHS concentrates on structural prerequisites for health, such as public policy, workforce and professional training, and resource allocation, and sets targets to achieve these. OHS at the national level is seeking to change management and workers toward a safety culture. Recent commitment to national uniformity in OHS in Australia provides the foundation for such a change.

OHS uses several approaches to achieve the objective of cultural change, including identification and control of hazards according to the hierarchy of control principle, see Table 8. The concept of

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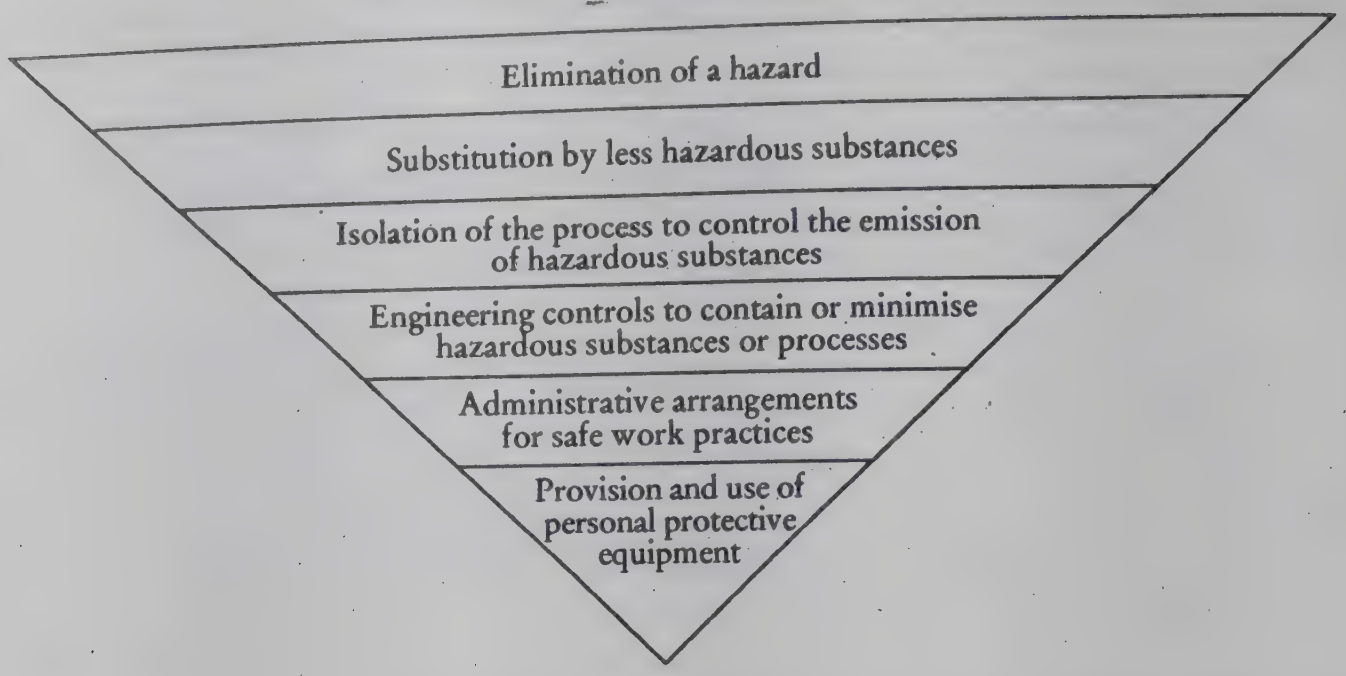
426 Worksafe Australia Corporate Strategic Plan 1992-1995.

427 Emmet, E A. 1992. New Directions for Occupational Health and Safety in Australia. *Jnl Occupational Health and Safety*. 8 (4):293-308.

428 All except occupational skin disorders.

Table 8: Measures in the Hierarchy of Control



Source: Mason C. 1992. Opportunities for an Ecological Strategy for Health in NSW - Possibilities for the Health Sector.

hierarchy of control could be usefully extended to other areas of health promotion.[429]

Achievement of the objective of cultural change in the workplace through enhanced OHS performance will be supported by efforts to achieve the objectives of ecologically sustainable development. The NOHSC supports the Ecologically Sustainable Development (ESD) Intersectoral Issues report recommendation that:

> the interdependence of health, including occupational health, and environmental factors be incorporated fully in national decision-making mechanisms concerned with ESD.[430]

Ecologically Sustainable Development provides a way of looking at the relationship between environmental, occupational, and public health issues which may allow the development of more integrated approaches at the national level.

The National Data Set for Compensation Based Statistics (NDS), enables Worksafe Australia to develop, as appropriate, goals and targets for the reduction of occupational injury and disease.

Goal:	Proposed targets
To reduce the incidence of occupational injury and disease by the provision of healthy and safe work environments	**Priority population: The whole workforce** To reduce the incidence of occupational injury and disease - Intermediate indicator: To increase the number of jurisdictions adopting National Occupational Health and Safety Commission policies, instruments and strategies

429 Mason C. 1992. *Opportunities for an Ecological Strategy for Health In NSW - Possibilities for the Health Sector.* NSW Health Department.

430 Ecologically Sustainable Development Working Group. 1992. *Intersectoral Issues Report.* Recommendation 2.1. Australian Government Publishing Service, Canberra. p xvi.

	Priority population: The workforce of selected national industries with high incidence, severity, and costs of occupational injury and disease[431] To reduce the incidence of occupational injury and disease Intermediate indicator: To increase the number of occupational health and safety improvement strategies and plans in selected national industries

The provision of well-qualified personnel to assist in the practice and promotion of best occupational health practice is essential to achieving the national mission of reducing the incidence and severity of occupational injury and disease.

The NOHSC also establishes occupational exposure standards which set maximum acceptable levels for occupational exposure to chemicals. The basic principle underlying the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) is to reduce workers' level of exposure to dangerous chemicals to a level at which there is minimal risk of harm to their health.

The National Management Strategy for Chemicals Used at Work is a comprehensive approach which includes:

- assessment and control of all industrial chemicals through the National Industrial Chemicals Notification and Assessment Scheme (NICNAS);
- information and education products, including Material Safety Data Sheets, labelling provisions, and training and education within the workplace;
- control of exposure through nationally uniform legislative requirements based on the National Model Regulations and Code of Practice to Control Workplace Hazardous Substances; and
- planning and assistance to emergency services.

Solutions to chemical management problems will only be effective if they integrate the above approaches.

Goal	**Proposed target**
To reduce workplace exposure to hazardous or potentially hazardous substances	**Priority population:** **The whole population** **Workers handling, transporting or working with hazardous substances** **Workers using agricultural and veterinary chemicals** To reduce unsafe exposure to hazardous substances Intermediate indicator: To ensure that all new, and those prior existing chemicals determined to be of significance are subjected to effective assessment procedures,[432] [433] and to standard codes of practice[434] and management strategies

431 Refer Table 1: Traumatic Work-Related Fatalities, Australia, for the type of industries which may be targeted.

432 OHS assessments of industrial chemicals are conducted under the Industrial Chemicals (Notification and Assessment) Act. 1989.

433 NOHSC Assessments of agricultural and veterinary chemicals are conducted under the interim National Regulation Schedule.

434 National Occupational Health and Safety Commission. 1991. *National Model Regulations for the Control of Workplace Hazardous Substances*. Australian Government Publishing Service. Canberra.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Lung cancer, Injury, Musculoskeletal disorders, Hearing disorders	Sun protection		Air quality, Noise, Waste disposal, Schools, Health care settings

b) Access to Paid Employment

Need for action

Employed people have considerably better health than people who are unemployed (see Table 9), or out of the workforce. Recent analysis by the Australian Institute of Health and Welfare [435] supports overseas research that unemployment affects physical and mental health significantly.[436 437 438]

Although some of this effect may be due to people with poor health selecting out of the employed population, lack of paid work is considered to be a significant risk for health. The negative impact on health of unemployment is likely to arise from both the material disadvantages resulting from low income and the damage to self esteem observed in unemployed people. The health of the families of the unemployed, especially their partners, also suffers.

Employment growth and opportunities are not equally spread throughout Australia. Some States and regions are particularly affected by loss of jobs, and the resultant increase in unemployment. The social and health impacts of such wide scale disadvantage are profound and need to be considered in a wider social context.

It is acknowledged that governments at all levels are committed to addressing the problems of unemployment through the creation of jobs and the provision of training. The growing evidence of the high social and health costs of unemployment provides further support for government action in this area. There is evidence that the threat of loss of work through retrenchment or redundancy[439] causes considerable distress, and may be modified through adequate warning, counselling and support.

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435 Mathers C. 1992. *Unemployment and Health : What do the Australian Data tell us?* Australian Institute of Health and Welfare. Australian Government Publishing Service, Canberra.

436 Bolin, B. 1987. Unemployment and health - New approaches in research and social action. *Social Science and Medicine.* (25)2: 197-199.

437 Martikaineu P. 1990. Unemployment and morbidity among Finnish men. *British Medical Journal* 301: 407-11.

438 Beale N and Northcott S. 1988. The nature of unemployment morbidity. *Jnl Roy Coll Gen Pract.* May, 1988: 197-202.

439 Mattiasson I et al. 1990. Threat of unemployment and cardiovascular risk factors: longitudinal study of quality of sleep and serum cholesterol concentrations in men threatened with redundancy. *British Medical Journal.* 301: 461-464.

Table 9: Summary of Findings: Health Status and Unemployment[440]

- *mortality rates were lower for employed men than unemployed males or men out of the workforce*
- *the prevalence of disability, serious chronic illness, recent illness, loss of activity as a result of illness and likelihood of being in fair/poor health were greater in men and women who were unemployed or out of the workforce*
- *the differential for women was less than for men, possibly because men are more likely to be unemployed or out of the workforce for reasons of ill health than women*
- *employed people were less likely to have back problems, hay fever, arthritis and hypertension than persons who were out of the workforce or unemployed*
- *the distribution of risk factors varied between employed persons and others particularly for smoking (employed less) and alcohol and inactivity (employed greater)*

Australian Institute of Health and Welfare

Goal

To reduce health impact of unemployment

Proposed targets

Priority population: Young unemployed people 14 - 25 years
To increase the proportion of unemployed young people with opportunities for paid employment and/or training programs

Priority population: People who have been unemployed for more than 12 months
To increase the proportion of people who have been unemployed for more than 12 months with opportunities for paid employment and/or training programs

Priority population: People who are threatened with sudden unemployment
To reduce the health affects of stress associated with sudden unemployment
Intermediate indicator: To increase the proportion of retrenched workers who are given notice, and pre and post-retrenchment counselling and advice

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1 (especially Cardiovascular mortality and morbidity, Injury)		Health literacy, Life skills and coping, Self help, Social support	

440 Derived from National Mortality data 1985-87 (death registrations) and population census data for 1986 (ABS); ABS National health Survey 1989-90; National Heart Foundation Risk Factor Prevalence Survey 1989; ABS Survey of Disability and Aging and reported by Mathers

c) Work Organisation and Health

Need for action

There is growing evidence of a relationship between work organisation and health.[441] Work that is meaningful and directed towards a desirable end has been shown to be associated with job satisfaction and improved health and wellbeing.[442 443]

Rosen[444] reported that poor working conditions, lack of control, tense working relationships, lack of career development, poorly managed change, and conflicts between work and family/leisure are associated with poor health in employees. Industry is reporting similar associations between productivity and organisation of work.[445 446] In recognition that employees are a critical resource for productivity a number of strategies are currently being developed by the Australian Government, industry, employer, and union organisations.

The best practice program, total quality management, and Australian Quality Awards all emphasise the need to develop the potential of employees. These initiatives have been facilitated by workplace relations reforms which have opened the way for multiskilling, award restructuring, new career structures, and enterprise bargaining. Education and training acts such as the Training Guarantee Act and TAFE reforms will raise the workforce skill levels.

A decline in sickness absence and lost time from injuries is recognised by the industrial sector as an early indicator of effective workplace reform.[447] As these changes in work organisation begin to redefine the ingredients of business success, new business indicators will appear to measure labour force involvement and skill levels, as well as other measures of participation. These measures will provide valuable measures of work arrangements that promote employee wellbeing and health.

Goal	Proposed target
To develop workplaces which are organised to promote health	Priority population: All workers To reduce the health effects of stressful and poorly organised working environments Intermediate Indicator: To increase the proportion of workplaces which have established mechanisms for worker participation in decision-making processes

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Mental health		

441 Cooper CL. 1989. The six major sources of stress at work. In: Edited by the Federal Centre for Health Education in collaboration with WHO Regional Office for Europe. 1989. *Health Promotion in the Working World.* Springer-Verlag. Germany. 47-54.

442 Sloan, R. 1987. Workplace health promotion: a commentary on the evaluation of a paradigm. *Health Education Quarterly.* 114(2): 181-194.

443 NSW Health. 1992. *Promoting Health in the Workplace.* ISBN 0 7305 3488X

444 Rosen, R. 1986. *Healthy Companies, a Human Resource Approach.* American Management Association Management Briefing. AM Membership Publications Ass., New York.

445 Peters T. 1986 *Thriving on Chaos.* MacMillan, London.

446 NSW Government Green Paper. 1990. *Transforming Industrial Relations in NSW.* Vol 2. Prepared by John Nyland. Ch 14.

447 National Health in the Workplace Committee

d) Workplace Health Promotion

Need for action

The National Steering Committee on Health Promotion in the Workplace defines workplace health promotion (WHP) as:

> Those educational, organisational, or economic activities in the workplace that are designed to improve the health of workers and therefore of the community at large. This type of health promotion involves worker and management participation on a voluntary basis in the implementation of jointly agreed programs which utilise the workplace as a setting for promoting better health.[448]

The National Health Promotion in Workplace Committee, with representatives of industry, the ACTU, and other organisations plays a leading role in promoting activities to promote health in the workplace. The Committee has developed guidelines and a kit for Health Promotion in the Workplace, covering the introduction of policy changes such as non-smoking policies, the development of healthy physical environments, the implementation of lifestyle programs to develop health skills and reduce the risk of disease, and supporting people in need of assistance with life crises or life changes through employee assistance programs.

For health promotion programs to be effective they need to address issues perceived by the employees as important and relevant. Table 10 outlines some of the characteristics of effective workplace health promotion.

A recent survey[449] suggested that large workplaces (500+) have high levels of health promotion activities and available information on health matters, but there is still a need for greater access to WHP in smaller worksites and for part-time and shift

Table 10: Characteristics of Effective Workplace Health Promotion Programs

- *Managers demonstrate commitment to promoting the health and wellbeing of employees by adopting supportive policies and allocating human and material resources;*
- *employee participation is voluntary and non-contingent;*
- *they complement and support OH&S programs;*
- *they are not prescriptive. Employee needs are assessed and form the basis for program development;*
- *they are comprehensive and ongoing;*
- *they are compatible with the structure, culture, laws and policies of the workplace;*
- *they are accessible to all employees;*
- *they enhance skills for achieving control over one's health and life;*
- *they encourage employee participation in their planning, development, running and evaluation;*
- *they provide opportunities to socialise;*
- *they treat the outcomes of any employee health assessments confidentially; . family participation is encouraged; and*
- *special provisions are made for non-English speaking, part-time, causal and shift workers.*

Derived from Health at Work Information Kit (NHIWP Committee) and Promoting Health in the Workplace (NSW Health).

443 National Steering Committee. 1989. *Health Promotion in the Workplace. Health at Work Information Kit.* National Heart Foundation. Canberra.

449 Health Promotion in the Workplace, National Steering Committee, 1992. *Health Promotion in Six Australian Industries.* Unpublished.

workers. Health Promotion in the Workplace offers opportunities to reach a large population group, to target socio-economically disadvantaged groups, and to provide a potentially supportive environment for preventive interventions.

As well as a venue for health promotion activities, the workplace can provide environments which are supportive of health. Smokefree workplaces,[450] canteens which serve a range of nutritious foods, provision of shelter/protection from sun for workers during lunch breaks, are some of the policies which can protect and promote health. As well as providing supportive physical environments, company policies can also provide supportive social environments which provide for leave to care for sick children and relatives, and opportunities for career breaks, help to reduce stress as employees balance work and family commitments, and provide access to services to assist with personal problems, such as child care advice or counselling for drug and alcohol problems.

Goal

To increase the proportion of workplaces which effectively promote the health of employees

Target

Priority population: All employees	level	year
To increase the proportion of employees not exposed to passive smoking in the workplace	100%	2000

Intermediate Indicator: To increase number of smoke-free workplaces
Baseline: Victorian figures quoted by NCADA 1991: 78% of employees already in smoke free environment

Proposed targets

Priority population: All employees
To increase the proportion of employees with access to catering facilities which provide a range of food consistent with Australian Dietary Guidelines
Intermediate indicator: To increase the proportion of canteens, shops, and mobile food carriers in industrial areas providing food which is consistent with Australian Dietary Guidelines

Priority populations:
All employees
All NESB employees
To increase the proportion of employees who have access to information on health issues through the workplace
Intermediate indicator: To increase the proportion of workplaces with a permanent health information area with materials in appropriate languages
Baseline: NHIWP Survey. Workplaces 100-499 employees 30%; Workplaces 20-99 employees 15%

Priority population: All employees
To increase the proportion of workers who participate in health promotion activities at work
Intermediate indicator: To increase the proportion of workplaces providing health promotion activities[451]
Baseline: NHIWP Survey. Workplaces 100-499 employees 74%; Workplaces 20-99 employees 45%

450 Hocking B, Borland R, Owen, N and Kemp G. 1991. A total ban on workplace smoking is acceptable and effective. *Journal of Occupational Medicine* 33(2):163-7

451 For example smoking cessation programs, weight control programs, supervised physical activity.

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
	Chapter 2.2 (especially diet and nutrition, physical activity, smoking, alcohol misuse)	Chapter 2.3 (especially Health literacy and Life skills and coping), Self help, Social support	

e) Rehabilitation

Need for action

There are special issues regarding work opportunities for people with chronic and permanent disabilities as well as return to work for acutely disabled people (rehabilitation).

Employed persons with an acute injury or illness usually resume work soon after treatment. However, for some conditions a more specific rehabilitation program is needed, as required by statute for cases of compensable injury and illness. Programs for rehabilitation of both compensable and non-compensable injury and illness need to be selectively developed and evaluated to produce good outcomes.

Goal

To ensure that people with acute injury or illness are able to return to work where possible

Proposed targets

Priority population: People with compensable injuries and disease
To increase the proportion of people with compensable injury who return to work

Priority population: People with non-compensable injuries and disease
To increase the proportion of people with non-compensable injury who return to work

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1		Chapter 2.3 (especially Life skills and coping, Social support)	

f) Chronic Disability

Need for action

The health, self esteem, and financial independence of persons with chronic physical and mental disability are all enhanced by the opportunity to participate in paid employment. Opportunities for training, sheltered employment, and modification of workplaces and work practices are ways in which the needs of people with chronic mental and physical disability can be addressed to enable them to enter the workforce.

Goal

To ensure people with chronic illness and disability have access to paid employment where possible

Proposed target

Priority population: People with chronic and permanent disability
To increase the proportion of people with chronic and permanent disabilities in paid employment

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Mental health problems and disorders, Developmental disability		Health literacy, Life skills and coping, Social support	Transport, Housing, home and community infrastructure

4.5 Schools

Not only do schools provide a setting for the care and development of students for at least ten years, but they also provide a valuable link with parents and the community.[452]

It has long been recognised that schools through their health education programs provide a critical vehicle for teaching students the health knowledge, attitudes and skills that they will need for life. Efforts to develop effective school-based health education programs have led to the evolution of more sophisticated approaches to health education, which is generally better organised through the school curriculum, and which has been successful in influencing the health behaviour and lifestyles of young people.[453]

Progress has been made in recognising that health issues need to be addressed more than once, and in ways which are relevant to the student's age and stage of physical, social and cognitive behaviours. Recognition that knowledge will not necessarily affect behaviour has led to the development of innovative methods for developing skills and attitudes which will help students make healthy life choices.[454] [455]

It has become apparent that information and understanding in the classroom can be either reinforced and supported, or completely undermined by what happens outside the classroom. Recognition that the taught curriculum is only part of what influences student behaviours and lifestyles[456] has led to greater attention being paid to the hidden curriculum in schools. The example provided by adults in the school, the health and safety of the physical environment, and the organisation and management of the school are increasingly recognised as significantly influencing students' attitudes and behaviours.

The student's family and caregivers, and the broader views of the local community, are also important in determining and reinforcing health promotion activities in the school. Involvement of parents, caregivers, and local community members in programs to improve nutrition, or to promote exercise may help develop knowledge and skills not only in the school but also within the broader community.

The concept of the Health-Promoting School attempts to balance the curriculum and classroom teaching with action directed towards improving the school environment and improving links with the family, caregivers, and the wider community. It is also part of a wider network of services which can be called on to assist with particular problems the student may be having at school or home. A comprehensive program to promote the health of young people in schools involves:-

- the school curriculum;
- the school environment;
- the interface between school and community; and
- links with health and welfare services.

In Australia, there are some excellent examples of programs to develop Health-Promoting Schools at State and local levels which should be strengthened and supported. The Teacher Education and

452 Kickbusch I. 1992. The health promoting school in Europe in *Network for Health promoting School Communities: Linking Health and Education*. University of Canberra.

453 Nutbeam D. 1992. The health promoting school: closing the gap between theory and practise. *Health Promotion International*. 7(3): 151-153.

454 Botvin, G at al 1980. Preventing the onset of smoking through life skills training. *Preventive Medicine*. 9: 135-143.

455 Arkin, RM, Roemhild, H F, Johnson CA et al. 1981. The Minnesota smoking prevention program. *Journal of School Health*. 11: 611-616.

456 Flay BR, Koepke D, Thomas SJ et al. 1989. Six year follow up of the first Waterloo smoking prevention trial. *American Journal of Public Health*. 79: 1371-1376.

Community Health Program (TEACH) in South Australia, Health in Primary Schools (HIPS) in Victoria, and Tasmania's Supportive School Environment are examples of State level programs. There are many examples of individual schools that are creatively working towards becoming health-promoting schools. Intersectoral committees are operating in many States, for example in Queensland, Western Australia and New South Wales. The level of activity demonstrates the commitment of health and education departments, schools, teachers, parents, and the community to the concept of the Health-Promoting School.

The Australian Education Council's National Goals of Schooling (1989) and the Guidelines from the National Network of Healthy School Communities (1992) provide useful frameworks for developing health-promoting schools.

This section of the report was developed from recommendations of a workshop held in Sydney on 14 August 1992.

a) The Curriculum

Need for action

The Australian Education Council has identified Health as one of the eight areas of learning which should be available for students in all State and Territory education systems in Australia as part of the Common and Agreed National Goals for Schooling in Australia.

The Council, particularly its Curriculum and Assessment Committee (CURASS), is working with education systems across the country to produce curriculum documents for the health area. A writing team based at Deakin University in Victoria is currently developing the Health Statement which will provide frameworks that both education systems and individual schools can use to determine their own curriculum structures, taking account of local content and opportunities, and methods of teaching and learning.

There are a number of principles underpinning the curriculum framework. These include:

- social justice;
- respect for self and others;
- supportive environments;
- democratic and participative processes; and
- the reciprocal responsibilities of individuals and communities.

The work on the Health Statement is at an early stage and may change significantly over the period of development. The learning areas will involve a study of the emotional, intellectual, mental, physical, social, and spiritual development and wellbeing of people within the settings of their everyday lives where they learn, work, play, and relate to others.

The Health Statement will look at a complex range of influences which enhance or limit people's wellbeing. These influences have been grouped into two main strands - human functioning and community environments.

The Statement brings together subjects such as health education, physical education, personal development, outdoor education, and home economics. There is variation between states and territories in the ways in which this area is organised and subdivided. The Health Statement shares some content with other learning areas, for example, Health and Studies of Society, and the Environment will address environmental concerns.

It is anticipated that the Health Statement and supporting documents will be completed by June 1993. The successful implementation of the new curriculum will require adequate space in the total school curriculum, adequate training of teachers, and the production of relevant support materials.

Goal

To provide opportunities for all students to develop health skills and knowledge to equip them for life

Proposed targets

Priority population: All schoolchildren
To increase the proportion of schoolchildren who complete a comprehensive health education curriculum from school entry until they finish school
Intermediate indicator: To increase the proportion of schools that have implemented a comprehensive health education curriculum from school entry until the end of school
Baseline: The proportion of schools adopting the National Health Curriculum Guidelines

Priority population: All schoolteachers
To increase the proportion who are trained to teach the health curriculum
Intermediate indicator: To increase the number of pre-service courses which equip trainee teachers to teach the health curriculum
Intermediate indicator: To increase the number of in-service courses which equip teachers to teach the health curriculum

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1	Chapter 2.2	Chapter 2.3	Physical environment, Transport, Housing, Home, and community infrastructure

b) Healthy Environments

Need for action

Schools provide a significant environment for staff and students. At their best, schools not only teach students the skills and knowledge they will need for life but provide opportunities for friendship, development of social skills, a sense of belonging and self worth for students of any cultural background. For staff, schools should provide work environments that are felt to be satisfying and where occupational health and safety issues are adequately addressed.

In order for schools to be healthy environments, it is important that the school community is involved in identifying health issues and working towards the solutions. This not only enables activities to be culturally relevant but also provides the opportunity for parents and community members to contribute their expertise. It is very important, for Aboriginal and Torres Strait Islander students particularly, to have the input of parents, caregivers, and community members in the development of programs and policies.

Schools have been in the forefront of recognising inequality in outcomes for different groups. The efforts of many school systems in concert with local school communities have made schools more relevant and acceptable to many groups, for example children from non-English speaking backgrounds or isolated rural communities. Many schools have also implemented programs and policies to address issues such as racism and gender differences.

There are some very practical ways in which the school can provide a healthy environment. These include making the grounds physically safe by providing safe playground equipment, playground surfaces,

crossings and gates. As well steps can be taken that enhance the safety of students and teachers include the wearing of appropriate protective equipment during sport and school activities such as Science and Woodwork when working in potentially hazardous situations. Safe storage and disposal of chemicals and other waste can also minimise risk to students and staff.

Concern has also been expressed at the perceived increase in violence in schools towards teachers and among students. The effects of this type of behaviour on the morale of staff and students is significant. There is need for schools to be places where both students and staff feel protected and able to work comfortably together in achieving the broader aims of the school.

Goal

To provide a safe school environment for students and teachers

Proposed targets

Priority population: Students
To reduce exposure to unsafe playgrounds
Intermediate indicator: To increase the number of playgrounds which have safe equipment and surfaces

Priority population: Students, staff and parents
To reduce exposure to unsafe crossings to reach school
Intermediate indicator: To increase the number of schools which have safe crossings to the school grounds

Priority population: Students and staff
To increase the access of students to safe equipment for sporting, recreational events and classroom activities
Intermediate indicator: To increase the proportion of schools with appropriate equipment for sporting, recreational events and classroom activities

Priority population: Students and staff
To reduce exposure to risks of sport-related injury
Intermediate indicator: To increase the proportion of teachers with training in the prevention of sport-related injury

Priority population: Students and teachers
To reduce the proportion of students and teachers who are exposed to physical or psychological violence at school
Intermediate indicator: To reduce the number of violent incidents

Cross reference targets

See end of section

There is growing evidence that the major risk factors for coronary heart disease have their origins in childhood.[457] [458] Well-targeted school based education/intervention programs can have a significant effect on risk factors, especially if the curriculum is supported by the provision of environments which promote healthy behaviours.

Schools can demonstrate and support healthy behaviours in a number of ways, especially by making healthy choices easy choices. This can be done by providing food at school canteens which is healthy and attractive, making access to recreational facilities easy for both girls and boys, promoting team and non-competitive sports,

457 Pyke JE. Australian Health and Fitness Survey 1985. 1986. *The Fitness, Health and Physical Performance of Australian School Students Aged 7-15 Years.* The Australian Council for Health, Physical Education and Recreation (Inc.) Adelaide, South Australia.

458 Powell KE and Dysinger W. 1987. Childhood participation in organised school sports and physical education as precursors of adult physical activity. *Am J Prev Med.* 3: 76-281.

and program outside activities at times of the day which will reduce exposure to UV light.

Achieving these changes is not without difficulty. Financial incentives to sell food which is high in fat, sugar, and salt remains a potential barrier in school systems where a canteen service needs to make a profit. Existing physical resources may not be easily modified to provide more attractive shade and recreational areas, and the importance of a health promoting environment may not have a high priority given the many competing demands on time and resources. Change, of necessity, may need to be incremental.

Schools can also provide models for society in addressing issues of racism, gender difference and the non violent resolution of conflict. The extensive work that is being done in the schools in attempting to value and recognise cultural differences, for example, not only in the curriculum but through changes in food at canteens, social activities to celebrate festive and national days such as National Aboriginal and Torres Strait Islander Week, and World Children's Day - practically reinforce the development of a health supporting school environment.

Policies in the school, for example parental leave, no smoking in the school grounds, and established procedures for dealing with conflict between students and staff, students and students and staff and staff help to develop supportive health environments for both staff and students.

Goal	Proposed targets
To create a health-supporting school environment	**Priority population: Students** To increase the opportunities for students to participate in formal and informal physical activity Intermediate indicator: To increase the range of physical activities available to students for informal and formal physical activity **Priority population: School community** To reduce exposure to smoking behaviour Intermediate indicator: To increase the number of schools with policies to eliminate smoking in school grounds **Priority population: Students** To increase the proportion of students who have access to a range of foods through canteens which are consistent with Australian Dietary Guidelines Intermediate indicator: To increase the number of schools which have canteens which provide a range of foods consistent with Australian Dietary Guidelines **Priority population: Students and staff** To reduce exposure to UV light while sitting in the playground Intermediate indicator: To increase the amount of attractive shade areas in the school environment **Priority population: Staff and students** To reduce exposure to UV light during play and physical activity Intermediate indicator: To increase the number of schools that have policies concerning wearing of protective clothing when playing outside Intermediate indicator: To increase the proportion of schools which do not timetable outdoor activities in the middle of the day

Priority population: Students and staff
To reduce the social and educational developmental effects of sexism and racism
Intermediate indicator: To increase the number of schools that have developed anti-racism and anti-sexism policies

Priority population: Students and teachers
To increase the proportion of students and teachers who use non-violent conflict resolution methods to resolve conflict
Intermediate indicator: To increase number of schools that have developed non-violent conflict resolution policies

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1 (but particularly Injury, Skin cancer, Mental health problems)	Chapter 2.2 (but particularly Physical activity, Smoking, Nutrition, Sun protection, Mental health, Diet and Nutrition)	Life skills and coping	Transport

c) School-Community Relationships

Need for action

The most important relationship between the school and the community is with parents and other caregivers. This relationship is having to be redefined as the structure of the family changes and more mothers enter the paid workforce. There are also moves in many educational systems for parents to take a more active role in the management of the school, enabling the school to more closely reflect the needs of the community in which it is located.

All children have need for love, safety, security, and stimulation. When a child commences school the school begins to share many of these responsibilities with parents and caregivers and there is a need for home and school to develop the best ways of sharing these responsibilities. Involvement of the parents and community in discussing the role and aims of the school, and in decisions about health policies and practices may help to minimise conflicts. It may also allow greater recognition of cultural differences in such areas such as food consumption patterns, gender roles and issues of sexuality.

Several innovative school health education programs, mainly for younger children have demonstrated the potential to involve parents and have indicated the likely benefits of doing so in terms of improved diet and activity patterns.[459] Benefits of these programs may flow over to the parents who, through their involvement in such programs as Jump Rope for Heart, increase their own understanding of current health issues.

All Australian schools exist within a local community. School programs can both influence and be influenced by the community. The community may be clearly defined as in a small country town or diffuse such as in the suburbs of large urban areas. Many of the resources that could be used to

459 Perry CL, Leupker RV, Murray DM et al. 1988. Parent involvement with children's health promotion: the Minnesota home team. *American Journal of Public Health.* 7.3

promote health are within these local communities and outside the school premises. Local government can provide playing fields; local businessmen can support specific projects; and service clubs can support leadership programs. On the other hand schools can contribute to the community's health by clean-up and recycling programs, environmental projects or assisting in fund raising activities.

Goal

To increase the proportion of parents and caregivers involved in policy development and implementation for health-promoting schools

Proposed targets

Priority populations:
All parents and caregivers of students
Aboriginal and Torres Strait Islander parents and caregivers
NESB parents and caregivers
To increase the proportion of parents and caregivers who are involved in the development of policies to develop health-promoting schools
Intermediate indicator: To increase the number of schools which involve parents in the development of policies related to developing health-promoting schools

Priority populations:
All parents and caregivers of students
Aboriginal and Torres Strait Islanders parents and caregivers
NESB parents and caregivers
To increase the proportion of people involved in health-promoting activities in the school
Intermediate Indicator: To increase the proportion of schools which involve parents, caregivers and the community in health-promoting activities

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1 (but particularly Injury, Communicable disease, HIV/AIDS)	Chapter 2.2 (but particularly Diet and Nutrition, Healthy sexuality, Mental health, Sun protection)	Chapter 2.3 (but particularly Social support)	Physical environment, Transport, Housing, Home and community infrastrucutre

d) Links with health/welfare services

Need for action

Health services have an important but limited direct role in developing health-promoting schools, and can best be seen as part of a broadly based team working toward a common end. Jointly planned programs by education and health systems at national, state, regional and local level can allow for maximum use of expertise and resources, prevent confusion of health messages between school-based and population-based programs, and facilitate the development of jointly supported policies and guidelines.

At the school level, health professionals (general practitioners, school health nurses and community health centre staff), and other welfare workers, provide a valuable resource to assist both pupils and school staff with problems they may be having in the school. Assistance can range from assisting with behaviour, learning or developmental problems, management of chronic disease, to assistance with cases of child abuse and family crises. School staff can also provide valuable insights into difficult situations, and provide much needed social support to children and families in difficulty.

Traditionally school health services have focussed on periodic screening of school-aged children. This is changing, and the issue of childhood screening is currently being reviewed by the National Health and Medical Research Council. The role of school health services may be altered to reflect the changing health problems in the community.

As well as health and welfare services, schools can often have well developed links with other community based services. These can be church based groups, service clubs, non-government agencies promoting the health and welfare of children (National Heart Foundation), groups which provide assistance for children with special needs (newly arrived migrants and children with learning problems or disability), or community based groups which use the school facilities (Before and After School Services, gym and dancing classes). These networks strengthen the school's relationship with the local community and provide useful contacts.

Goal	Proposed target
To improve the health status of students	**Priority population: Students** To increase the proportion of students with remediable disabilities and health problems (including mental health problems) whose problems are detected early Intermediate indicator: To increase the number of school based staff trained and resourced to detect correctible disabilities and health problems **Priority population: Students with remediable disabilities and health problems** To increase the proportion of students with remediable disabilities and health problems who receive adequate and appropriate assistance Intermediate indicator: To increase the proportion of schools which have access to remedial programs which meet the needs of students and staff **Priority population: Students and staff** To increase the proportion of students and staff with chronic health problems who receive appropriate medical care/support at school Intermediate indicator: To increase the proportion of teachers who have had appropriate training on the (self) monitoring of minor illness and chronic disease, for example, asthma and diabetes

Priority population: Students and staff
To increase the proportion of staff and students with access to timely and appropriate first aid when needed
Intermediate indicator: To increase the proportion of school staff who have a recent first aid certificate
Intermediate indicator: To increase the proportion of schools with fully equipped and well maintained first aid areas

Priority population: Students, staff, parents and caregivers
To increase the proportion of staff,students, parents and caregivers with access to counselling and guidance in times of crisis or difficulty
Intermediate indicator: To increase the proportion of schools which have access to crisis and counselling services

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Chapter 2.1 (but particularly Injury, Communicable disease, Teenage pregnancies, Diabetes, Asthma	Chapter 2.2 (but particularly Diet and Nutrition, Alcohol misuse, Healthy sexuality, Safety behaviour, Immunization)	Health literacy, Life skills and coping, Self care, Self help, Social support	

2.4.6 Health Care Settings

In Australia in 1989-90, there were approximately 1,000 acute care hospitals, 60 public psychiatric hospitals, 1,500 nursing homes and 1,000 hostels, the latter providing a minimal level of health care and long-term accommodation for young disabled and older people.[460] There are more than 580 community health centres in Australia offering a wide range of primary health care services. Furthermore, in 1991, almost 8% of employed Australians worked in the health industry.[461] As a major employer the health care system has a significant role to play in protecting and promoting the health of employees.

The wide geographical distribution of primary health care and hospital facilities, and the large numbers of people who use them each year means they can be powerful models of healthy environments in their local communities. Their roles as employers, service providers, producers/consumers and researchers mean that health care services have a range of opportunities in which to provide leadership in promoting health.

There have already been several initiatives taken in Australia to develop the potential of health services as healthy environments. The national Health Promoting Hospitals Project based in Victoria, and the Green Hospital Award in Queensland are two examples.

The Australian Community Health Association, the Australian Hospital Association and the Victorian Hospitals' Association's Health Promoting Hospitals Project Manager (who has, in turn, consulted a range of individuals and organisations in Australia) were invaluable in providing the advice which has informed the development of this part of the report. The Health Promoting Hospitals Project has drawn on its established links with a range of other key individuals and organisations, and its own experience to suggest both the framework for organising the goals and targets in this part and useful advice on specific targets.

The accreditation standards developed by the Australian Community Health Association[462] for reviewing quality and effectiveness in community health services (the Community Health Accreditation and Standards Program, CHASP) reflect concern for the services being health promoting environments both physically and in terms of the processes used to develop and conduct services. The standards have provided important leadership in, and are also an effective mechanism for, review. More than 117 community and primary health agencies have used the service review system since 1987.

By March 1992, the Australian Council on Healthcare Standards had accredited more than 350 hospitals in Australia. The standards used to accredit hospitals include a number which highlight the role of hospitals as safe and health-promoting environments, and it is intended that these be developed further in the near future.

Health care settings can be health promoting environments by:

- protecting the physical environment;
- providing suitable facilities;
- caring for the wellbeing of users and employees; and
- promoting the health of users and employees.

Protecting the physical environment. Health care settings can use measures to reduce air, soil and water pollution; managing waste effectively; selecting energy-efficient transport systems and use gas, water, and electricity efficiently.

460 Australian Institute of Health and Welfare. 1992. *Australia's Health 1992.* Australian Government Publishing Service, Canberra. p 115.

461 Australian Institute of Health and Welfare. 1992. *Ibid,* p 5.

462 Australian Community Health Association. 1991. *Manual of Standards for Community Health.* 2nd Ed. Australian Community Health Association.

Facilities design. The design of health service facilities can protect and promote the health and safety of both service users and employees in a number of ways for example, health care settintgs can ensure ready access to people with limited mobility; ensure facilities are physically comfortable and welcoming; provide facilities for group education; use non-slip floor coverings which minimise noise levels; provide secure parking areas; and protect all people from exposure to hazards including chemicals, radiation (including solar radiation), and tobacco smoke. In this respect, the health care system can provide important leadership by striving to achieve the goals and targets outlined in the **Work and the Workplace** part of the report.

Caring for the social and psychological wellbeing of users and employees. The quality of the social environment for service users, visitors, and employees has a role to play in promoting health - by encouraging a sense of belonging and social contact. (See **Social support** and **Work and the Workplace** parts). For employees, work satisfaction is an important issue while quality of care and consumer satisfaction with services are also important concerns.

Promoting the health of users and employees. Health services also have a direct role to play in promoting actively the health of users and employees.

a) Physical Environment

Need for action

Health care services can contribute to the protection of air, water, and soil quality by:

- purchasing and recycling of supplies (particularly by hospitals) in order to reduce the use of non-renewable resources and contribute to broader recycling efforts in the community; and

- employing best practice in waste minimisation and management to reduce the quantity of waste produced (particularly by hospitals) and improving the efficiency and safety of waste handling; and

- employing best practice use of electricity, gas and fossil fuels.

b) Built Environment

Need for action

The Australian Community Health Association, the Australian Council on Healthcare Standards and the Commonwealth Department of Health, Housing and Community Services conduct accreditation programs designed to assist community health centres, hospitals, and nursing homes, respectively, to achieve and maintain high quality services and standards of care, including the physical fabric of the buildings.

Particular attention is paid to issues such as wheelchair access, secure parking areas, sufficient space in which to carry out the work as required, fire safety and, in the case of the Community Health Standards and Accreditation Program (CHASP), to work satisfaction.

c) Social Environment

Need for action

The social and psychological aspects of caring for people in contact with, or who work in, the health services are important factors in promoting health. For service users, the care and sensitivity with which treatment is delivered are important to their recovery. (Employee satisfaction with their work has been addressed in the **Work and the Workplace** part of this Report).

d) Health Promoting Environment

Need for action

As in other workplaces, there are a number of ways in which policies, work practices, and facilities can contribute to promoting the health of staff and consumers. There are examples, too, of health services working with local communities to increase the range of options for physical and recreational activities available to community members.

Goal

To increase the proportion of health care settings which have actively implemented strategies to become healthy environments

Proposed targets

Priority population: The whole population
To reduce the long term consequences of use of non-renewable resources
Intermediate indicator: To increase the proportion of purchases by health care services of recycled paper and reusable equipment for example, where this is safe and cost effective

Priority population: The whole population
To reduce exposure to air, water, and soil pollution generated by health care services
Intermediate indicator: To increase the proportion of health care services which have implemented waste and energy minimisation management plans

Priority population: Health service users, visitors, and employees
To reduce exposure to health care facilities which do not meet appropriate health and safety standards.
Intermediate indicator: Increase the proportion of health care facilities which have met the appropriate standards set by the Australian Community Health Association, the Australian Council on Healthcare Standards or the Department of Health Housing and Community Services. For example, Work and the Environment (CHASP), Facilities and Equipment, Environmental Services (ACHS)

Priority population: Health service users, visitors
To increase the proportion who express satisfaction with the services they receive
Intermediate indicator: Proportion of health services conducting regular quality improvement/quality assurance programs measuring key aspects of the social environment

Priority population: Health service users, visitors, and employees
To reduce exposure to smoke in health care settings
Intermediate Indicator: To increase the proportion of health care facilities that have implemented non-smoking policies

Priority population: Health service users, visitors, and employees (including shift workers)
To increase the proportion who have access to catering services that supply a range of food consistent with the Australian Dietary Guidelines
Intermediate Indicator: To increase the proportion of hospitals where the range of food offered in canteens is consistent with the Australian Dietary Guidelines

Priority population: Health service employees (including shift workers), and local community members
To increase the proportion who have access to a range of physical and recreational activities
Intermediate Indicator: To increase the proportion of health services providing facilities for physical and recreational activities

Cross reference targets

Preventable Mortality and Morbidity	Healthy Lifestyles and Risk Factors	Health Literacy and Health Skills	Healthy Environments
Cardiovascular mortality and morbidity, Lung cancer, Injury, Musculoskeletal disorders	Food and nutrition, Physical activity, Smoking, Alcohol misuse, Quality of medicines	Social support	Work and the workplace

CHAPTER 2.5

Challenges for the Health Care System

The Contribution of the Health Care System to Population Health 2.5.1

The short Australian tradition of setting goals and targets within the health care system has been largely confined to prevention and health promotion, and has had little impact on the mainstream health services. It has attracted criticism for this reason. However, the magnitude of the task of reorienting the health care system toward a concern with goals, targets, health outcomes, and health gain should be clearly appreciated. Current patterns of management and practice are based on historically-defined and justified processes. There is far more concern with the process of providing the highest quality services than with the best outcome; with allocation than with true efficiency; with structural reform than with assuring maximum health gain for investment.

Nevertheless, there is a respectable body of international opinion that setting goals and targets related to service delivery and performance in the health care system could be an effective mechanism for ensuring the maximum health benefit from investment. This remains to be proved, and the circumstances under which it works effectively need to be defined, but as a working hypothesis there is enough to justify experimenting with it as an approach.

Part of the interest in this alternative focus on outcomes rather than process derives

from the fact that continued growth in health care service provision is becoming unsustainable for economic, political, and sociocultural reasons. Even in the US, where the notion of market-place medicine finds its highest expression with 12-13% of GNP devoted to health care and 34 million people without health insurance, there is a consensus of dissatisfaction among health care providers, recipients, insurers, and government, sufficient to energise debate about radical health care reform. Virtually every OECD country is now looking for reform in the health system in the light of unsustainable investment in health.

.2 Achieving the Right Balance in Investment to Optimise Health Gains

The proposition that declared goals and targets may assist in allocating resources for health care is closely related to the economic view that relates expenditure to outcome, and cost to effectiveness. This is set within the economic construct of efficiency – obtaining optimal gain from investment. The term efficiency used in this context has nothing to do with cutting costs, and indeed an efficiency analysis may well lead to a proposal for enhanced funding for some programs where significant further health gains may follow from marginally increased investment.

Efficiency, as correctly applied to the health services, has two components. The first has to do with the way services (preventive, curative, palliative, or all three) for a particular problem (for example, heart disease) are organised and resourced. The second component of efficiency concerns achieving the right mix of programs to maximise health gain.

In the first case, the challenge for those concerned to promote and improve health in a defined geographical area is to achieve an optimal balance in the investment of resources available to gain maximum individual and community health within individual programs (for example, heart disease, obstetrics, trauma, etc). Discussions concerning optimal investment will, obviously, be based on best available information, and will need to involve those most directly concerned with the provision of programs and services. Decisions will also need to take account of community perceptions and concerns relating to the provision of health services.

Critical to achieving optimal investment is the identification of opportunities to change the service structure or delivery to free up resources from some less efficient service element to do something instead that yields a higher gain in terms of health. Therapy and care currently demand the most significant proportion of the health budget and will undoubtedly continue to do so for the foreseeable future. For these reasons change will only be possible at the margins of a program to fund a more cost-effective element of that program.

Even allowing for such constraints, it is within this framework, where health gain is the focal point, that prevention and health promotion could be most comfortably located and compete for funding. Competition would be on the substance of their claim to achieve better health gains for a given cost. Where prevention is demonstrably a more efficient investment of resources it would prevail.

In the second case, a health service which provides a technically efficient service for its heart disease patients, but an insubstantial service to its cancer patients, is not efficient in this, the second sense of the word efficiency - known as allocative efficiency.

It should be emphasised that an increased focus on efficiency and on health gain is intended to complement, not replace, existing efforts to ensure quality of care in the health system. Pursuing both is essential.

Recommend

In the short term, there may be benefits to establishing a project to review evidence concerning efficiency in investment where currently there is adequate and available information. The management of injury and cardiovascular disease represent two promising possibilities for such study.

The current dilemma is generated as much by the breadth and depth of our current technological capability as it is by a primary resource crisis. The steady increase in investment in health services of approximately 4% per annum can be traced directly to the introduction of new technology. Funding a service where everybody received everything of which we were currently technologically capable would almost certainly now be beyond our capacity to support. A rational and ethical solution to deciding on how resources should be applied, and under what conditions, is urgently needed.

2.5.3 Health Goals and Targets and the Health Care System

A serious debate about efficiency cannot occur without prior definition of what a service is aiming to achieve and knowledge of what health is gained for individual patients or the community as a result.

The establishment of goals and targets, with their implication of restraint and the need for establishment of priorities, does not sit comfortably with the prevailing culture in the health system and the values held by some of the medical profession and other health care providers. Following a strong sense of ethic of duty many medical practitioners would maintain that it is their task, as patients' advocates, to work for (including lobbying), those additional resources which might enable them to provide a higher standard of service to their patient group, without concern for the consequences that might flow to others as a result of the diversion of resources for their purposes. The ethic of duty to the individual patient and all that goes with it in terms of the search for additional resources can easily conflict with concern about the efficient application of resources. Clinicians should not be placed in positions of such ethical conflict. Many decisions concerning the efficient use of resources need to be made one or more steps removed from the bedside for this reason.

Recommend

The determination of priorities among the goals and targets should be based at least in part on a concern with efficiency - identifying where health gain will most likely be achieved, and at what cost.

Current arrangements for public funding of the health care system (particularly hospital and community health services) are up for review and re-negotiation between Commonwealth and States for 1993 (the Medicare agreement). This process invites discussion about intention, outcome, efficiency, and quality in investment in health services. It presents an important opportunity to examine the feasibility of re-orienting the health care system towards the achievement of optimal population health outcomes through the best balance in investment of health service resources.

The goals and targets in this report form the basis for such a statement of intention and outcome and should be referred to in an appropriate way within the context of revised arrangements for funding of the health care system.

The health care system in Australia comprises a wide variety of components. A mix of public hospital services, community health services, general practitioners, medical specialists, allied health professionals, public health practitioners, and private hospital services provide the wide range of primary, secondary, and tertiary services currently available to the population.

The complexity of the system has meant that, for pragmatic reasons, the proposals outlined in this chapter refer largely to two major components of the health care system - the community health system and services provided through public hospitals.

As a consequence, the crucial role of general practitioners in achieving the goals and targets is not fully reflected in the analysis in this chapter of the report. Focussing attention on health outcomes from the health system will require active and continuing involvement of general practitioners who have unique opportunities to promote health and prevent ill health.

Recom

Close attention will need to be given to communicating with general practitioners to identify priority goals and targets relevant to their work, and a clear commitment should be made to identify mechanisms to involve general practitioners in the implementation strategy.

5.4 Equity of Access and Efficiency in Resource Allocation

Concern with efficiency in resource investment may not be enough to achieve the equity of access to health opportunities and care that many would argue is still needed in Australia. The original sentiments behind the Health for All concept may not be served adequately. Making progress in achieving greater efficiency in the organisation, resourcing, and mix of programs could be served by the mechanisms described in the previous sections of this chapter. Such an approach might be enhanced by setting targets relating to efficiency in resource investment, including:

- targets to modify the type of services provided, and balance in provision (including preventive, palliative and curative services); and

- targets to balance the level of expenditure across the range of services (preventive, palliative and curative), and across the mix of programs.

Establishing targets for service provision and access to services which are directed towards the achievement of equity also makes good sense. Such targets might include:

- targets to increase access to services (particularly preventive services) by defined population groups; and

- targets to increase community participation in decisions governing the provision and siting of services.

mend ***It should be recognised that there may well be some services where a decision to favour equity of access, even at a higher cost, may be seen to be the right one. The key to success in this process is a debate in which the values underlying resource allocation are made more explicit. Targets which relate to equity of access to services could be comfortably accommodated within such a framework.***

2.5.5 Targets for Health Outcomes

At present, most health service management information is based on providing evidence that the system works in practice according to criteria which have been developed to control costs and manage throughput. Current diagnostic, treatment and care patterns for given clinical problems vary (considerably in some cases) between units, areas and States across Australia. At present, there is little evidence that such variation is related to better patient outcome or to improved population health. This is a fundamental issue which is being systematically addressed in a number of countries, most notably in the United States through the Patient Outcome Research Team (PORT)[463] project which may provide indicators suitable for adaptation for use in other countries attempting to reorient services towards the achievement of optimal patient and community health outcomes.

In NSW, the Health Department has initiated a Health Outcomes Project based on consultations with area and regional health services over the introduction of health outcome goals for the health system. This project is utilising existing data on health outcomes and identifying gaps in health information which need to be filled to support the future development of the project. Targets for health system activity which might be defined through this process include:

- targets to modify rates of surgical and diagnostic procedures to reflect disease incidence, correspond to accepted good clinical practice, and reflect equity in access to specialised health care;
- targets to reduce rates of unplanned readmissions to hospitals;
- targets to reduce complication rates from health care provided by health services;
- targets to reduce the incidence of hospital-acquired infections; and
- targets to increase consumer and community satisfaction with services.

Achieving a reorientation in the health system towards population health gains implicit in the health goals and targets will not be easy. It implies progressive changes in resource allocation and in the mechanisms which are at the heart of the health care system in Australia. Despite these difficulties, the importance of health outcomes for the health care system was recognised in the communique from the April 1992 meeting of Australian health ministers in Sydney. This committed the ministers to including appropriate reference to the National Health Goals and Targets in the revised Medicare Agreement (1993).

Recomm

Achieving change will take time, not least because of the paucity of useful measures of health outcome which could serve as a basis for funding decisions. Improving the information base for decision-making is an important priority for progress in this direction.

The development of a range of outcome indicators should be approached systematically, modelled on the Commonwealth and State casemix funding program which ensured adequate resources for development over an extended period of time. AHMAC may be the best body to oversee such a program, and the NHMRC, together with AIHW should have a significant role in facilitating the process.

463 De Friese, G. 1990. Ed. Measuring the effectiveness of medical interventions: new expectations of health services research. *Health Services Research.* 25(5):691-5

.6 Achieving Cultural Change in the Health Care System

Achieving reorientation also implies changing the culture of the health system, and winning staff support for change. The importance of professional education and training in this process was highlighted in the chapter on implementation (1.5).

Some of the difficulties of changing the thinking of clinicians and other health professionals about the nature of their work and the decision-making process involved in gaining resources for the development of clinical services have also been noted in this chapter. However, many health professionals, notably clinicians, are becoming more aware of, informed about, and engaged in assessing, the relation between resource allocation and clinical achievement. For example, the NHMRC Health Care Committee's Standing Committee on Quality of Health Care is currently exploring this issue further.

By a judicious combination of structural change and education it is possible for health professionals to play a major role in the implementation of programs designed to achieve the health goals and targets which are the substance of this report. However, in order for this to happen, the magnitude of the change required within the health system needs to be clearly understood, and the benefits of this approach in terms of a more ethical and effective basis for clinical practice will have to be communicated positively to clinicians and other health professionals.

To this end, it will be necessary to continue to consult with those who will be responsible for implementing and managing change in health services.

mend ***To contribute to this process, a communication strategy for the current document will need to be developed. The strategy should take into account the principal groups who will be responsible for implementation of sections of the report, and be appropriate to their interests.***

2.5.7 Concluding Remarks

The goals and targets in this report will be achieved in large part by resource allocation decisions within the health care system and beyond. Leadership is required from the health sector to win commitment from other sectors in achieving better health for all Australians. State/Territory and Commonwealth health departments and health professionals are in the best position to demonstrate such leadership.

If all we hear from our health leaders is endless debate and conflict about different ways of paying for health care, and administrative details about service provision devoid of any concern about purpose, we can be sure that no-one in any other sector will wish to join in. If they do, it will not be because they see a vision of better health that excites their imagination and fires their commitment.

One way of clarifying the purpose of the health system in Australia would be to consider critically the goals and targets proposed in this report within the new Commonwealth and State/Territory financial (Medicare) agreement. This would ensure that among the many issues about funding the public health services in Australia, some clear attention is also given to purpose, direction, and outcome.

Not all that might be done can be done. This applies as much to primary health care as it does to the public hospital services. Every manager knows the necessity for setting priorities. Often in health care this is done on historical and political lines, but the goals and targets proposed in the report can be applied usefully in this context to focus attention on health gain as a criterion for priority setting.

An ethical approach to priority setting requires that those setting the priorities be clear about what they are trying to achieve. It is political peace or is it health gain? If it is the latter, what are the needs, what might we hope to do to ameliorate them, by what strategies, at what cost? At least two of these questions are addressed in this report - the question of what might be done, and what we might hope for in tackling that problem. Issues of cost and opportunity cost require information that in many cases must be developed because it does not currently exist, especially in the area of outcome indicators.

The challenges facing us are fundamental – of redefined, or at very least, reclarified purpose, of visionary leadership, of a concern with productive use of health care resources, of setting priorities according to what effective things might be done, and the most desirable use of resources to achieve the greatest gains in health. This cultural seachange is already beginning, and the goals and targets proposed in this report will be a constructive contribution.

APPENDICES

APPENDIX 1

Terms of Reference

The terms of reference were:

- review the current framework/categories and actual set of national health goals and targets, including their application, and use within Australia;

- develop an improved framework and set of categories for national health goals and targets;

- review and, where appropriate, adjust existing health goals and targets;

- develop new national health goals and targets in areas where they currently do not exist for example, mental health;

- refine the Interim National Aboriginal Health Goals and Targets for incorporation into this general framework;

- examine options for, and make recommendations on, the use of national health goals and targets in future policy and program development and resource allocation; and

- examine options for and make recommendations on the monitoring and review of national health goals and targets and make comment on the link between the goals and targets and the biennial report by the Australian Institute of Health to the Australian Government on Australia's health.

APPENDIX 2

Consultation

Since publication of the Progress Report in May 1992, more than 2,200 copies of the report have been distributed for comment.

Consultation:

States and Territories

As stated in the Progress Report, the review team undertook a planned program of consultation with each of the States and Territories. In each State/Territory the Minister for Health and senior health officials were briefed and a series of public meetings was organised.

Consultation Meetings

Members of the Review Team attended a series of eonsultative meetings with a range of organisations as follow:

- Environmental Health Committee, National Health & Medical Research Council;
- Health Care Committee, National Health & Medical Research Council;
- National Health & Medical Research Council;
- Wentworth Area Health Service (NSW);
- Queensland Branch, Public Health Association of Australia;
- Consumers' Health Forum;
- Federation of Ethnic Communities Councils of Australia; and

- Aboriginal/Torres Strait Islander Commission and the area of the Department of Health, Housing and Community Services responsible for the National Aboriginal Health Strategy.

Consensus-building Workshops

There were several sections in the Progress Report which required much further work. In each of these a national, consensus-building workshop was held in order to expand the range of issues addressed, to develop improved frameworks for setting goals and targets and to identify goals and targets.

The following workshops have been held since publication of the Progress Report.

- Work and the Workplace
- Transport and Communication
- Injury
- Schools and Educational Institutions
- Mental Health

A workshop on Food and Nutrition had been held earlier in the year, prior to publication of the Progress Report.

The participants in each have been listed later in this Appendix.

Assistance with Specific Sections of the Report

In the course of further developing the goals and targets a large number of individuals and organisations have contributed directly.

Written Comments:

The Review Team has received more than 200 written responses from the following individuals and organisations.

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Housing, Home & Community Infrastructure

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APPENDIX 3

Summary of Responses to the Review and Revision of the National Health Goals and Targets Progress Report

Distribution

More than 2,000 copies of the Progress Report were distributed nationally - to each Minister of Health, each State/Territory Health Department, and a wide range of government and non-government organisations and individuals.

The Progress Report was also distributed to Federal and State Ministers in relevant portfolios - Education, Housing, Community Services, Employment and Training, Transport and Communications, Environment, Primary Industry, and Aboriginal Affairs.

More than 200 written comments were received in addition to the many verbal comments received during the course of the consultation.

Summary of Comments

Overall Assessment:

Social View of Health

- Overall, there was wide agreement with the principle of developing national health goals and targets which reflect a social view of health. However, many respondents commented that the Progress Report did not, in fact, reflect a social view of health - pointing to the relatively limited sections on health literacy and healthy environments.

These comments were taken seriously and the final report is now much more comprehensive in both sections, covering a much wider range of issues in much more detail than was the case in the earlier report. Throughout the development of the report, consultation and discussions have been continuing - extending and refining the targets in those areas in which goals and targets have not been set before. Many of the proposals in these two sections will need further review and revision over time.

Conceptual Framework

- There was general agreement with the framework although some suggested that using population groups or geographical area (pin-pointing areas of social disadvantage as outlined in the Social Atlas of Australia) as starting points would have been preferable. However, no-one outlined a complete alternative framework.

As there is no single conceptual framework which explains and describes all determinants of health and illness the review team devised a framework which provided a means of classifying current knowledge of determinants of health in Australia. There has been a conscious effort to use the framework to assist in defining outcomes and to differentiate between behaviours, knowledge and skills, and structural changes required in order to achieve improved health. The framework has proven useful but has highlighted the need for continued discussion on alternative conceptual models of health.

Focus on Inequalities

- There was wide agreement with the focus on reducing inequalities. Some respondents, however, had difficulty with the definition of priority populations - believing this to imply that the individuals in these groups were both entirely responsible for their own health status and that they were also responsible for taking action to change this.

The rationale for delineating priority populations has been explained much more clearly in part 1.2 of the final report.

Engaging the Health Care System

- There was agreement with the intention to actively involve the whole of the health care system in the achievement of the goals and targets and on the need for intersectoral involvement.

Specific Criticisms:

Revised Chapters and Targets

- Many respondents suggested changes to:

– specific goals, priority populations, targets and baseline data;

– additional issues for inclusion (e.g. testicular cancer);

– changes to the order or grouping of goals and targets (e.g. cervical cancer and cervical screening are now linked); and

- changes to section titles (e.g. healthy sexuality).

Wherever possible, these suggestions have been included in the final report. Needless to say, the process has highlighted differences of opinion. Wherever possible we have referred to national reference groups to obtain their advice.

The goals and targets in this report are congruent with those in the complementary sets for Aboriginals and Torres Strait Islanders, Children and Young People, and Women. We have also consulted extensively with the national programs in nutrition, drugs and alcohol, cervical screening, and breast screening etc.

Each of the subgroups within the healthy environments section has been carefully negotiated with relevant individuals, organisations, and departments. The goals and targets have been designed to highlight the health interest in the issue and intermediate indicators have been proposed - providing direction for those sectors which will be responsible for their achievement.

General Criticisms:

Limitations of Setting Quantifiable Targets

- There were concerns about setting quantifiable targets at all, covering a range of views that:

- the targets have not been based on a complete understanding or analysis of **secular trends and demographic changes;**

- failure to achieve the targets could mean the reduction of resources in some areas or for some issues and to **reduced resources** for health promotion in particular;

- setting quantifiable targets can mean overlooking or ignoring the **processes** by which improved health status should be achieved;

- setting goals and targets implies an overly simplistic analysis of causes of health and ill health and overlooks the complexity and unpredictability of the effects of any social intervention;

- national health goals and targets may lead to overlooking local needs and issues; and

- the health system will be held entirely responsible for the achievement of the goals and targets - of concern because so much of the action to achieve them must be taken in sectors other than health.

Wherever possible, the targets have been based on understanding of secular trends, demographic changes and data which enables prediction of the likely effects of intervention. However, the lack of suitable data has meant that some are not as well developed.

It is important, however, to see the targets as having a strategic as well as a technical purpose. Many are the best estimates possible at this point, but much of the importance of the figures lies in their highlighting the direction and magnitude of change required if we are to genuinely reduce inequalities in health. This is particularly true where, for example, we have proposed targets to bring the health of the Aboriginal and Torres Strait Islander populations closer to that of the non-Aboriginal population.

Using quantifiable targets also highlights the lack of data in many areas. It is possible to set strategic directions or goals and directional indicators of course, but this will not, necessarily, highlight information requirements.

The review team has recommended that effective systems for monitoring and reviewing progress toward the targets be set up. These are intended to not only measure progress, but also to provide a mechanism for understanding and reviewing what has been done in order to achieve a given level of results. It is important that those things which have not succeeded be understood as well as those things which have led to the desired results.

However, the goals and targets represent end-points. They are not, in themselves, strategies. Nor is it possible for all to be taken up by everyone in a whole community. They must now be used by different people in different ways. Furthermore, these will change over time.

Need for Strategies

- Perhaps the greatest concern reflected by the respondents was the fact that the report does not include strategies for the achievement of the goals and targets.

  Some felt that without strategies the document will be useless. Others felt that before it is possible to develop national health goals and targets there is need for a strategic framework, a cohesive model of health (including all its determinants and their inter-relationships), and mobilisation of the entire health care system. A further group felt that process targets would be at least as important as, if not more important than, the outcomes expressed in the current goals and targets.

A number of general recommendations for action to implement the national health goals and targets have been included in the text of the report.

The development of strategies is a vital but separate step which follows the development of national health goals and targets. Generally, specific strategies have not been included in the goals and targets for a number of reasons.

A national strategy may not always be the most appropriate to tackle a particular problem. Furthermore, a wide range of strategies is already in place in Australia.

Strategies vary according to needs of specific population groups and according to the history of intervention or action. Take smoking for example. Initially the focus of interventions was to raise awareness of the problem and to change social norms regarding smoking. The strategies which were required to achieve these ends are different than those required now to bring about further changes in environments and legislation.

The major rationale for developing the goals and targets using a social view of health was to highlight inequalities. It is clear that strategies which will help to reduce inequalities must be developed with and for the specific population groups in question. In this report, community participation has been viewed as a strategy rather than as an outcome, with a major contribution to make to decision-making about priorities, resource distribution, and implementation.

Need for Community Participation

- Many respondents expressed concern that the Progress Report did not highlight sufficiently the need for community participation. There were concerns that:

  – lack of community participation in the preparation of the goals and targets would limit the range of areas in which targets were developed;

  – unless community members were involved actively in developing and prioritising the goals and targets there are limited chances of success in achieving them; and

  – unless targets were set for levels of community participation in decisions that affect their health, it is possible that community members will not be sufficiently consulted about and involved in the priority-setting, resource-allocation processes, and changes to structures to enable the achievement of the targets.

These issues have raised several dilemmas inherent in the preparation of a national document such as this. One of the most important of these is how to identify and reflect the pluralistic needs and values of communities and individuals in Australia within a limited time and with limited resources.

The review team sought and received feedback on the Progress Report from a limited number of peak organisations. Other individuals and organisations attended the open meetings held to discuss the Progress Report in most States and

Territories, and a large number of organisations and individuals took up the opportunity to comment directly on the Progress Report. The final report now includes targets or proposed targets covering many issues which were not included in the previous report.

Community consultation, itself, relies on there being communities on behalf of which individuals and organisations can speak - since it is clearly not possible to consult every individual. So that, people living in a geographic area, people working in the same place, people experiencing similar life stages etc are all communities. However, these are rarely national, or even Statewide. The Health Issues Centre in Victoria and the Consumers' Health Forum Inc. both made it clear that they do not see themselves as speaking for the whole population. The review team decided that community involvement and participation are more meaningful at the levels at which communities actually exist and that the selection of priorities and the development of initiatives for the achievement of these is much better done at these levels.

There is evidence that community participation is indeed vital if the proposed changes in health status are to be achieved. In this sense, the review team regarded community participation as a strategy rather than an outcome.

Principles to Underpin Action

- A number of respondents articulated principles upon which effective action to bring about change should be based. These have included:

- primary emphasis on the reduction of unjust inequalities in health status. More than one respondent pointed out that the achievement of equity may not mean the most efficient use of resources - it may be more costly to achieve improvement in the health of those who are most disadvantaged;

- the need for active community participation in setting priorities, deciding on action and in decision-making about resource allocation;

- the need for intersectoral collaboration - the development of partnerships with other sectors, organisations and individuals;

- the need for interventions to be appropriate to the population, issue and location;

- the need for all health workers to have a clearly identified and mandated role in the achievement of health outcomes; and

- the need for an infrastructure to oversee and enable the achievement of the goals and targets. The infrastructure will need to include responsibility for research, monitoring and surveillance systems, leadership, review mechanisms, and capacity to explore the ethics of action taken to achieve the goals and targets.

Communicating the Implications of the National Health Goals and Targets

- Many people have pointed to the need for a co-ordinated communication campaign to follow the publication of the goals and targets. Their concern is that unless the community and the health care system own at least sections of the goals and targets, they will not be effective in moving health policy, resources, or action toward an outcomes approach.

The publication of national health goals and targets is a first step. There is now need for careful consideration of the steps which must be taken in order to ensure the implementation of action to achieve the national health goals and targets. There is need for these to be taken up by the States/Territories, the Commonwealth, and other government and non-government organisations. At least as important is the need for wide discussion with the community and with special interest groups - in order to decide on priorities and to co-ordinate action.

APPENDIX 4

List of Acronyms

ABS	Australian Bureau of Statistics
ACCI	Australian Chamber of Commerce and Industry
ACHS	Australian Council on Healthcare Standards
ACHA	Australian Community Health Association
ACTU	Australian Council of Trade Unions
AGPS	Australian Government Publishing Service
AHMAC	Australian Health Ministers' Advisory Council
AIHW	Australian Institute of Health and Welfare (formerly Australian Institute of Health)
ANZECC	Australian and New Zealand Environment and Conservation Council
ATSIC	Aboriginal and Torres Strait Islander Commission
CAFHS	Child, Adolescent and Family Health Service, South Australia
CHASP	Community Health Accreditation and Standards Program
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCSH	Department of Community Services and Health (Commonwealth)
DHHCS	Department of Health, Housing and Community Services (Commonwealth)
DOH	Department of Health (Commonwealth)
EPA	Environment Protection Agency
ESD	Ecologically Sustainable Development
IGAE	Inter-Government Agreement on the Environment
MUARC	Monash University Accident Research Centre
NCADA	National Campaign Against Drug Abuse
NDSP	National Drug Strategic Plan
NESB	Non-English speaking Background
NHF	National Heart Foundation
NHIWP	National Health in the Workplace Committee
NHMRC	National Health and Medical Research Council
NHS	National Health Strategy
NISU	National Injury Surveillance Unit
NOHSC	National Occupational Health and Safety Commission
OHS	Occupational Health and Safety
PHERP	Public Health Education and Research Program
RTA	Road Traffic Authority, NSW
SCW&H	Subcommittee on Women and Health (Subcommittee of AHMAC)
WHO	World Health Organization
WHP	Workplace Health Promotion

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